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Stopping Thefts of Oil in East Texas Area Will Automatically Strengthen Price Structures

By ANDREW M. ROWLEY

UNCERTAINTY regarding the crude and refined oil situation is due entirely to doubt as to the sincerity of efforts of state officials in Texas to stop illegal production and thefts of oil in the East Texas area. Recent events constitute a sad commentary on state government and the mixing of politics with a vital business. Fortunately there is still time to correct the situation and place the oil business again in its recent position of moving forward to better times.

Conditions will improve immediately and the price structures for crude oil and gasoline will strengthen automatically the minute the flow of stolen oil to markets is stopped. The legislature in Texas has clarified the law regarding stealing; property owners in the East Texas area are up in arms at the seeming negligence upon the part of duly constituted authorities to enforce the law and conservation regulations; and increasing pressure is being brought to bear upon these authorities to stop this racketeering. It is a stigma upon the name of Texas that conditions, such as are reported from East Texas, have been permitted to exist.

The importance to the petroleum industry in Texas and elsewhere throughout the nation cannot be overestimated. Legitimate crude oil production has been held to a low level but benefits which should have accrued to producers as a result of this stabilization of output have been postponed because of failure to stop thievery. The fact the present price structure was maintained in the face of large quantities of stolen oil being dumped on the market is proof there was a larger demand for crude oil than production figures indicated. Removal at this time of illegally produced crude oil from the channels of trade will strengthen the general situation, place the price structures for both crude oil and gasoline on a sound foundation and will eliminate any further talk of a possibility of a reduction in prices.

The most important matter before the petroleum industry of the United States at this time is to prevent the stealing of oil in East Texas and Oklahoma City. It is no time to sit supinely and let a small, selfish group undo all the good that has been accomplished and prevent producers from procuring the reward in the form of better prices they so richly deserve.

Crude Oil Production in the United States

Estimated daily average production for the week ending September 17, and a comparison with previous week and one year ago, follows:

	Sept. 17	Sept. 10	Sept. 19, 1931
Oklahoma—			
Oklahoma City	72,120	82,415	4,250
Seminole-St. Louis	119,540	106,545	56,710
Remainder of State	195,855	205,260	196,985
Total Oklahoma	387,515	394,220	257,945
East Texas—			
Lathrop	149,593	136,543	100,303
Kilgore	117,505	107,858	167,848
Joiner	119,117	111,161	151,274
Total East Texas	386,215	355,562	419,425
West Texas	167,121	170,417	204,496
North Central Texas	72,365	74,156	77,484
Texas Panhandle	49,354	47,363	65,529
East Central Texas	56,319	56,705	57,112
Gulf Coast Texas	136,638	129,637	117,662
Southwest Texas	59,762	58,245	61,953
Total State of Texas	927,774	891,885	1,003,661
Kansas	97,485	96,530	107,930
North Louisiana	29,940	29,080	29,715
Gulf Coast Louisiana	33,747	34,542	26,784
Arkansas	33,690	33,700	38,045
Eastern fields	112,000	112,000	111,000
Rocky Mountain area	74,976	76,800	93,014
California—			
Santa Fe Springs	58,000	59,000	61,750
Long Beach	70,750	70,500	79,000
Playa Del Rey	14,250	14,500	21,000
Elwood	13,900	13,500	25,750
Kettleman Hills	59,000	59,500	65,750
Remainder of State	262,100	263,500	258,250
Total California	478,000	480,500	511,500
Total United States	2,175,127	2,150,157	2,179,594

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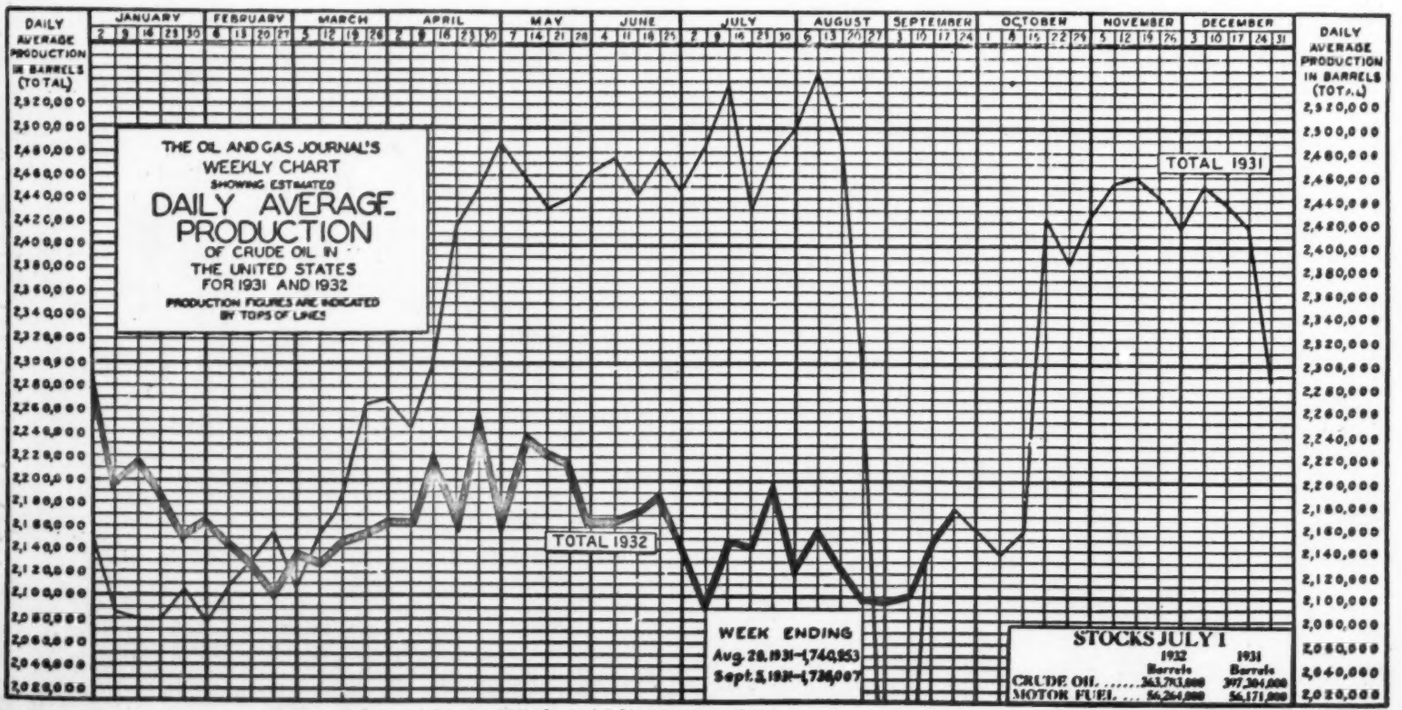

Considerable Equipment Used Up Drilling Over 118,000,000 Feet of Hole in 18 Months

By L. G. E. BIGNELL
Petroleum Engineering Editor

During the past two years there has been a noticeable slowing up of drilling operations in all fields, except East Texas, and the question is now being raised as to how long it will be safe for the industry to continue the policy of curtailed drilling. There are many different angles from which this problem may be considered, but the one of most interest to the manufacturers of oil field equipment will naturally cover the probable time when increased demand for material may be expected to start.

In order that this problem may be considered from some known set of data the accompanying table showing what has been done in the past two and one-half years has been compiled and it shows that there has been nearly 22,500 miles of hole drilled in 1930, 1931 and the first half of 1932. The work done in 1930 was about on the average maintained for the past 10 years, but 1931 showed a decided decrease in the number of wells. The first half of 1932 shows some increase in the number of wells drilled and a bigger increase in the footage made.

All of this indicates that equipment has been used to do this work, but whether the quantity used up during this drilling can be estimated is another problem.

To give some basis for calculation, the following is quoted from Walter H. Jeffery's third edition of "Deep Well Drilling" and should be applicable to this general problem. The figures given have been carefully compiled and with the notations will serve as a basis for an estimate on what amount of equipment has been used in drilling 118,601,340 feet, more or less, of new hole.

Life of Drilling Equipment

"There are so many variables affecting the life of drilling equipment that it is exceedingly difficult to formulate reliable tables of life or service that may be expected of such equipment. Many factors enter into such a calculation, such as the depth of the wells and the character of the formations to be drilled; care and attention to the outfit, or lack of it; fishing jobs or accidents that put extraordinary strains on certain tools; degree of efficiency of the drillers; local drilling conditions, etc.

"For example, drilling bits used in abrasive and stone would not have half the life of bits used in drilling soft shales. The figures in the tables contemplate ordinary repairs to maintain the equipment at reasonable efficiency during its life. The following tables, therefore, must be regarded as averages only, based upon a composite of experiences in various fields.

ROTARY OUTFIT

	For drilling— Over 5,000'	Less than 5,000'
Boiler†	25,000	20,000
Engine	75,000	75,000
Chain	12,000	15,000
Rotary	40,000	50,000
Drawworks	50,000	60,000
Swivel (with renewal bearings)	50,000	60,000
Slush pumps‡	35,000	40,000
Drilling line	4,000	6,000
Traveling block (with renewal bearings)	40,000	50,000
Casing hook	100,000	125,000
Sand line, per foot of line	4	5
Bailers	40,000	50,000
Hose, rubber	15,000	20,000
Hose, steel	40,000	50,000
Elevators	60,000	75,000
Tongs	75,000	100,000
Fishtail bits	7,500	10,000
Rock bits*	35,000	40,000
Drill pipe	10,000	15,000
Tool joints	15,000	20,000
Turbine generator	50,000	50,000
Boiler feed pump	50,000	50,000

*This estimate is for the body of the bit; cutters often have to be renewed after drilling a few feet.

†Depending upon quality of water used.

‡Liners, valves and pistons renewed every 6,000 feet.

Depth of Holes Classified

The following table will show the footage drilled in holes of various deoths and at the same time indicates something as to the type of drilling practice. In holes from 1,000 to 2,100 feet it is quite common practice to use portable drilling machines. In the deeper holes the rotary is generally used. However, in some districts it is required that the wells be completed with cable tools and this necessitates a combination outfit.

FOOTAGE OF HOLES DRILLED IN THE UNITED STATES IN 1930, 1931 AND FIRST HALF OF 1932

Area—	Av. depth	Comp. 1930	Footage	Comp. 1931	Footage	Comp. 1932	Footage	Total footage
Eastern	2,000	3,874	7,748,000	1,726	3,452,000	738	1,476,000	12,676,000
Lima-Indiana	1,650	2,671	4,407,150	1,205	2,158,200	546	900,900	7,466,250
Michigan	1,780	295	525,100	127	226,060	66	117,480	868,640
Mississippi	2,500	60	150,000	76	190,000	35	87,500	427,500
Missouri	1,000	3	3,000	4	4,000	0	.....	12,000
Illinois	1,400	204	286,000	39	54,600	18	25,200	365,800
Kansas	2,500	1,036	2,590,000	470	1,175,000	220	575,000	4,340,000
Oklahoma	4,750	3,466	16,463,500	1,058	5,025,000	445	2,113,750	23,602,250
N. Central Texas	2,500	2,909	7,272,500	1,055	2,637,500	518	1,295,000	11,205,000
E. Central Texas	3,000	305	915,000	184	552,000	86	258,000	1,725,000
East Texas	3,650	15	54,750	2,396	12,295,490	2,737	9,990,050	22,440,290
East Texas (gas)	3,650	37	135,050	58	211,700	24	87,600	434,350
West Texas	3,000	733	2,199,000	321	963,000	90	27,000	3,189,000
Panhandle	3,600	587	2,113,200	199	716,400	65	234,000	3,063,600
Gulf Coast	2,350	1,361	3,198,350	544	1,278,400	260	846,000	5,322,750
Southwest Texas	4,700	1,193	5,607,100	624	2,932,800	869	1,734,300	10,274,200
North Louisiana	3,500	746	1,865,000	258	645,000	122	305,000	2,815,000
Arkansas	2,500	127	317,500	60	150,000	18	45,000	512,500
Montana	1,800	183	327,600	98	172,800	14	25,200	525,600
Wyoming	2,500	152	380,000	71	177,500	14	35,000	592,500
Colorado	4,800	57	256,500	27	121,500	18	81,000	459,000
New Mexico	4,000	209	836,000	58	232,000	23	92,000	1,160,000
Utah	2,600	4	10,400	2	5,200	1	2,600	18,200
California	3,000	1,009	3,027,000	484	1,452,000	209	627,000	5,106,000
Total		21,240	60,692,700	12,245	36,928,060	6,746	20,980,580	118,601,340

Total Locations 1930 21,240
Locations 1931 12,245
Locations 1932 6,746
Total 40,231

CRUDE OIL DATA FOR THE PAST 10 YEARS

	Domestic production	Imports	Exports	Indicated domestic consumption	Stocks end of year	Weighted average prices
1931	851,081,000	47,250,000	25,525,000	913,759,000	370,919,000	$0.65
1930	898,011,000	62,129,000	22,705,000	954,467,000	411,882,000	1.19
1929	1,007,323,000	78,922,000	26,402,000	1,024,038,000	428,445,000	1.27
1928	901,474,000	79,767,000	18,966,000	950,046,000	391,869,000	1.17
1927	901,129,000	58,382,000	15,843,000	879,037,000	279,560,000	1.30
1926	770,874,000	60,382,000	15,256,000	842,134,000	315,029,000	1.88
1925	763,743,000	61,824,000	13,127,000	830,275,000	343,820,000	1.48
1924	713,940,000	77,776,000	17,871,000	754,095,000	361,655,000	1.43
1923	732,497,000	82,015,000	17,210,000	716,164,000	374,512,000	1.34
1922	557,531,000	120,255,000	10,637,000	585,929,000	306,511,000	1.61

DRILLING LIFE OF EQUIPMENT STATED IN TERMS OF THE NUMBER OF FEET DRILLED—CABLE OUTFITS

	California, Wyoming, Alberta, Can.	Kansas, Oklahoma, North Texas Deep	Kansas, Oklahoma, North Texas Shallow	Penn., Ohio, W. Va., Illinois, Kentucky Deep	Penn., Ohio, W. Va., Illinois, Kentucky Shallow
Rig irons*	15,000	15,000	.....	20,000	.....
Boiler†	30,000	30,000	40,000	40,000	50,000
Engine	75,000	75,000	100,000	75,000	100,000
Belt	6,000	10,000	12,000	10,000	12,000
Manila cable, per ft. of cable	3	1½	4	1½	4
Wire cable, per ft. of cable	1½	3	4	2½	4
Bull rope	2,000	2,000	.....	2,500	3,500
Sand line, per ft of line	3	5	5	4	6
Temper screw‡	50,000	50,000	75,000	75,000	100,000
Rope sockets	10,000	15,000	20,000	12,500	15,000
Jars—short stroke	2,000	2,000	2,500	2,000	2,500
Jars—long stroke	1,200	1,200	1,500	1,200	1,500
Stems§	40,000	40,000	50,000	25,000	50,000
Bits, 9⅝-inch and larger	10,000	12,000	15,000	10,000	12,000
Bits, 5¾-inch and smaller	8,000	10,000	12,000	8,000	10,000
Bailers¶	20,000	20,000	25,000	20,000	25,000
Tool wrenches	100,000	100,000	125,000	100,000	125,000
Barrett jack, less rack	20,000	20,000	30,000	20,000	30,000
Rack for Barrett jack	30,000	30,000	40,000	30,000	40,000
Swivel tool wrench	75,000	75,000	100,000	75,000	100,000
Derrick Crane	75,000	75,000	100,000	75,000	100,000
Chain hoist	40,000	40,000	50,000	50,000	60,000
Elevators	60,000	60,000	75,000	75,000	100,000
Casing line	10,000	15,000	25,000	20,000	25,000
Casing blocks	40,000	40,000	50,000	40,000	50,000
Casing hooks	75,000	75,000	100,000	75,000	100,000
Casing tongs	60,000	60,000	75,000	60,000	75,000
Spider and slips	75,000	75,000	.....	.....	.....
Anvil	75,000	75,000	80,000	75,000	80,000
Steam blower	50,000	50,000	50,000	50,000	50,000
Turbine generator	50,000	50,000	50,000	50,000	.....
Measuring line	40,000	40,000	50,000	40,000	50,000
Bit ram	75,000	75,000	75,000	75,000	.....
Boiler feed pump	50,000	50,000	50,000	50,000	50,000
Injector	50,000	50,000	50,000	50,000	50,000

*Rig irons: In some of the deep fields of Oklahoma a set of rig irons will drill not more than two wells, while in other localities one set may drill 10 or more wells.

†Boiler: The life of a boiler depends on the quality of the water available. A boiler that would drill 10 to 20 wells in West Virginia might not complete one well in Wyoming where alkaline water is used.

‡Including one replace of main screw, box, yoke and tee screw, and bail bearings.

§Stems: The life of stems may be extended to the point of crystallization by renewing the boxes and pins when worn out.

¶Bailers: The valve of a bailer may batter or wear out on one well. The figures in this table contemplate the renewal of the valve when necessary.

1,000 to 1,500-Foot Holes

Missouri	12,000
Illinois	365,800
Total	377,800

1,500 to 1,900-Foot Holes

Lima-Indiana	7,466,250
Michigan	868,640
Montana	525,600
Total	8,860,490

1,900 to 2,100-Foot Holes

Eastern	12,676,000
Total	12,676,000

2,200 to 2,500-Foot Holes

Mississippi	427,500
Kansas	4,340,000
North Central Texas	11,205,000
Gulf Coast	5,322,750
North Louisiana	2,815,000
Arkansas	512,500
Wyoming	592,500
Total	25,215,250

2,600 to 2,800-Foot Holes

East Central Texas	1,725,000
California	5,106,000
West Texas	3,189,000
Utah	18,200
Total	10,038,200

2,100 to 3,700-Foot Holes

East Texas	22,440,290
East Texas Gas	434,350
Panhandle	3,063,600
Total	25,938,150

3,750 to 4,750-Foot Holes

Oklahoma	23,602,250
Southwest Texas	10,274,200
Colorado	459,000
New Mexico	1,160,000
Total	35,495,450

Situation in Oklahoma

In Oklahoma there are wells of all depths from very shallow ones using "spudders" to the 10,079½-foot deep test in Cement Field. It is probable that the greatest number of holes have been drilled with cable tools and portable outfits, but the greatest footage by rotary outfits. Oklahoma City completed about 872 wells in 1930, 1931 and the first half of 1932 to depths of about 6,500 feet each.

In the Seminole district of Oklahoma the wells are drilled to the top of the Viola with rotary and then completed with cable tools. About 850 wells have been completed in that area in the past two and one-half years.

East Texas Field has had the most active period of drilling during 1931 and 1932 and the activities there have used up a vast amount of equipment of all kinds. Drilling costs have been reduced from $3.50 per foot to around $1.50 per foot and at this latter price it is very safe to assume that equipment is being used up without replacements and therefore will soon be out of the picture.

The need for drilling additional oil wells is becoming more and more apparent when depletion of stocks of oil above ground, decline of rate of production in the flush fields, increasing number of dry holes as compared with wells drilled, and shorter flush period of production in the deeper fields is considered.

From all the data available it would seem that there must be increased activity in drilling and to do this new work will require much new equipment. This need for new equipment will perhaps be hastened because of the small amount of money invested in upkeep on equipment now in use, for it is a well-known fact that all types of machinery will wear out much more rapidly if some parts are permitted to go unattended for a long time.

XUM

Refiners to Halt Drop in Premium Gasoline Due to Over Stressing of "Regular" Grades

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Sept. 17.—Extensive newspaper and billboard advertising of new and improved brands and types of regular priced motor fuel, which has followed the installation of additional cracking facilities in the refineries of many of the major companies, has reached the point where the refining and marketing branch of the industry, perhaps unwittingly, has seriously "unsold" the American motoring public on the virtues of Ethyl Gasoline, virtually the premium grade for the industry, and with a general realization of this situation, a number of the major companies are reported revising their sales campaigns to correct this situation.

It is no secret in marketing circles that margins of profits in the distribution of gasoline have not been satisfactory. Most distributors have stressed their regular gasoline but have added a third grade to which they have given more sales attention than they have to their premium product. The net result of the shifting in gallonage has been an increased volume of the nonprofitable third grade, little or no increase in the regular grade, sold either at a small profit or a loss, with a large decline in premium sales, the most profitable phase of station operation. In other words, as regards profits it now appears that many companies have lost more than they gained by placing too much stress on volume of regular and cheap grades and forgetting the possibilities of the premium grade for which a profit is assured.

Ethyl Sales Decline

Sales of Ethyl Gasoline during the first seven months of 1932 have shown an average falling off of approximately 30 per cent from comparable sales totals of last year, it is estimated, and if the present trend continues, sales for the full year 1932 will probably record a decline of between 35 and 40 per cent, as compared with the 1931 totals.

The principal reasons for the drop in domestic consumption of Ethyl Gasoline, in the order of their importance, appear to be:

1. General improvement in quality of nonpremium gasolines, which on the average are now 4 to 5 octane numbers higher than similar brands marketed during the 1931 season.

2. Curtailed purchasing power in practically all sections of the country, incidental to lower wages, smaller automobile registration, and a general drop in consumption of premium or luxury products, into which category Ethyl Gasoline falls.

3. An unorganized but nevertheless concerted policy on the part of many Ethyl licensees of placing their entire sales and advertising efforts behind their own brands of "regular" gasoline, with no pressure to sell the Ethyl premium grade.

While the improved quality of the regular brands of motor fuel, as well as poor business conditions, has of course affected sales of Ethyl blends, the almost total absence of advertising and merchandising support on the part of the Ethyl licensee companies has exerted no less influence upon total sales, while the claims advanced for some of the newer types of "regular priced fuel" have been definitely detrimental to Ethyl Gasoline.

Not only have most of the domestic Ethyl licensees refrained almost entirely from advertising or merchandising support of their Ethyl brands during the motoring season just ended, but the advertising activities of many of the major companies marketing Ethyl Gasoline have so stressed the merits of their own particular brands of regular gasoline that, inferentially at least, the merits of Ethyl blends have been disparaged and the sale of the premium product definitely discouraged. Some typical advertising statements booming various of the new and improved regular fuels, selected from advertisements published during the summer season by many of the major companies and psychologically, at least, reflecting strongly on the earlier claims for the Ethyl blend, are as follows:

Types of Advertising

Associated Oil Co., "Flying A" Gasoline—"Flying A Gasoline gives you road-proven octane stability—sustained antiknock performance in every mile. It costs no more."

Atlantic Refining Co., "White Flash" Gasoline—"The great super motor fuel at no extra cost."

Continental Oil Co., "Conoco" Gasoline—"They don't make better gasoline anywhere. It's the best you can buy."

Mid-Continent Petroleum Corp., "Diamond" Gasoline—"It is powerful, quick starting, peppy and high in antiknock rating—has everything."

Phillips Petroleum Co., "66" Gasoline—"Highest test at the price of ordinary gasoline." And, in a footnote in this company's advertising, one of the few references to Ethyl Gasoline in oil company advertising during the motor season: "For those who prefer it—Phillips 66 Ethyl at the regular price of Ethyl Gasoline."

Pure Oil Co., "Purol Pep" Gasoline—"The thrifty antiknock gasoline. This regular price gasoline has an antiknock rating equaling some 'premium grades'."

Richfield Oil Co., "Hi Octane" Gasoline—"One tankful of Hi-Octane will show you smoother performance, more power and speed by a wide margin than you've ever experienced with any other gasoline. . . . It does not have to be dyed to conceal impurities and dirty color."

Shell Eastern Petroleum Products, Inc., "Shell" Gasoline—"Shell saves your engine from knocks, slow pickup, oil dilution, slow starting, gummy valves. Yet it costs you nothing extra."

Sinclair Refining Co., "Sinclair Regular" Gasoline—"Not only equal to but superior to some premium fuels costing you 3 cents more per gallon."

Standard Oil Co. of Louisiana, "Standard" Gasoline—"Standard 1932 gasoline has everything."

Standard Oil Co. of California, "Standard" Gasoline—"For high octane efficiency—Standard Gasoline."

The Texas Company, "Texaco Fire Chief" Gasoline—"A vastly superior motor fuel with every quality which makes for finer carburetion and instant power—at no extra price."

Tide Water Oil Co., "New Tydol" Gasoline—"The new Tydol has more premium qualities than many so-called premium gasolines costing 3 cents more."

Union Oil Co. of California, "Union 76" Gasoline—"Here is more horsepower—at no extra cost."

Vacuum Oil Co., Inc., "Climatic Control Mobilgas"—"Mobilgas gives the highest usable level of performance wherever, whenever, you drive. And remember, there is no price increase for Climatic Control."

White Star Refining Co., "Staroline" Gasoline—"Staroline, accepted as the outstanding leader among de luxe gasolines—always commanding the premium that the highest quality merits, now reduced to the price of 'regular.' The new Staroline combines features of starting, antiknock rating, and power heretofore impossible in one fuel."

Thus far in the year, the advertising of various new grades of gasoline which have been introduced on the domestic market have almost without exception stressed the "regular price" feature equally with that of improved quality. The various references to "premium grades" and "gasolines costing you 3 cents per gallon more" are all apparently aimed at Ethyl Gasoline, in as much as the premium on Ethyl Gasoline at the pumps is 3 cents per gallon practically all over the country, and in fact Ethyl is now the only nationally recognized premium motor fuel.

With new types of high compression motors appearing on the market in new model automobiles, and a steadily expanding market for Ethyl Gasoline indicated, the industry has witnessed the anomaly of falling sales of Ethyl. The reason is not hard to find. From a study of the above quotations from the newspaper advertisements of various oil companies (all Ethyl licensees) picked at random from recent advertisements by these companies, it is evident that the industry as a whole has been indirectly attacking Ethyl quality and Ethyl price.

Octane Rating

Present Ethyl Gasoline specifications call for an octane rating of 78 on all Ethyl blends marketed in the United States. This is a high mark to shoot at with non-Ethyl "regular priced" gasoline. Yet, notwithstanding the fact that few of the "regular" grades of motor fuel have an octane rating in excess of 70 octane number, and that many of them are between 65 and 70 O.N., the claims of various refiners regarding the qualities of their regular priced motor fuels, in a broad sense, indicate that these fuels are not only equal to Ethyl Gasoline in some respects, but that some of them have an "edge" in the matter of quality and all 'round desirability. That this is generally the fact is very much open to question.

While a decline of between 30 and 40 per cent in total sales of Ethyl Gasoline this year would not be out of proportion for an abnormal year such as 1932, which has witnessed a sharp contraction in domestic consumption of all gasolines, a closer supervision over the advertising claims by their respective organizations on the part of executives of major companies marketing both Ethyl and regular grades of motor fuel would tend to materially reduce this decline curve on Ethyl Gasoline over the balance of the year. Executives of a number of companies have already arrived at a belated recognition of the situation created by their desire to match their regular product with that of competing refiners and marketers, and are passing along orders to their marketing departments to concentrate more heavily on Ethyl Gasoline sales during the remainder of 1932. The first and final quarters of the year are normally the peak sales periods of Ethyl Gasolines, which are especially popular with motorists during cold weather, and an organized effort on the part of refiners marketing this premium gasoline to recapture their trade in Ethyl Gasoline is expected to be reflected in a substantial recovery in sales volume on the premium fuel later in the year.

Sharp Competition

Competition among major companies in the sale of their "regular" gasolines, and extending in some instances to sharp competition on third grades, has so occupied the time of many marketing executives this year that they have completely lost sight of the possibilities of their premium fuel market. Others, believing the present conditions call for popular priced products in their territories, have concentrated on their regular grades, but have so planned their advertising and merchandising campaigns that they have been "robbing Peter to pay Paul"—booming sales in one division of their markets, and at the same time discouraging sales in their premium fuel division, which after all has been one of the most profitable, in so far as gasoline margins are concerned, during recent years.

With the exception of the Sun Oil Co. and Cities Service Co., all of the major American oil companies are now Ethyl Gasoline licensees, so the unprecedented campaign of booming the sale of regular grades of gasoline through indirect reflections on the premium grade has not been the result of one faction of the industry campaigning against an opposing group.

Many of the companies which have been so energetically advertising the merits of their "regular" gasolines during the past several months are among those which in recent years were the strongest boosters of Ethyl Gasoline quality, and have strongly featured the premium quality in their advertising and sales promotion work. The abrupt swing in the other direction, which appears to have far exceeded the original intentions of the refining and marketing branch of the industry, is now being taken in hand, and an early trend in the other direction is indicated on the part of many large companies.

Texas Legislature Orders Inquiry on Conservation

AUSTIN, Tex., Sept. 19.—Investigations by three members of the Texas House of Representatives into the enforcement of the oil conservation laws has been authorized by that body on motion of Representative R. J. Long of Wichita Falls.

Mr. Long argued that the State should be vitally interested in the upholding of conservation laws in the Yates Field of West Texas because of large interests of the University of Texas and the public school fund in that area. He pointed out that a restraining order against proration there already had been obtained.

The resolution pointed out it had been charged conservation laws were not being enforced and proration rules in the East Texas oil field were being "grossly violated." It recalled that a breakdown in the State's conservation laws would be detrimental to the commonwealth because 50 per cent of its revenues were derived from taxes on the oil industry.

It claimed independent gas producers in the Panhandle gas field were without pipe line outlets. While they could not realize from their gas, the pipe line companies were draining the supply.

Mr. Long said an inquiry by the committee should afford the next legislature information that would help it in passing more adequate conservation statutes.

XUM

National Petroleum Association Convention Asks Government Economies and Tax Relief

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

ATLANTIC CITY, N. J., Sept. 16.—Rigid government economies as a step toward balancing the national budget and freeing the petroleum industry from part of its exceptionally heavy burden of taxation was demanded by the National Petroleum Association at the closing session of its thirtieth annual convention here today. The proceedings of this year's meeting were largely given over to the discussion and consideration of tax problems and the uncertainties of the relationship between business and Government, and the sessions developed not only a determined sentiment for aggressive action looking toward the removal of the so-called nuisance taxes from the oil industry, but likewise early modification of the heavy tax burden imposed by the steadily climbing local taxes on gasoline sales.

The resolution adopted by the association on the taxation question follows:

"Whereas, the Federal Congress has imposed special taxes on the sale of gasoline and lubricating oil, and

"Whereas, such taxes when superimposed upon taxes already assessed by states, counties and municipalities result in imposing a substantial and undue burden upon the industry, and

"Whereas, it is the view of this assembly that in the light of present economic conditions, industry should be relieved of all possible tax burdens; and, whereas, it is the view of this assembly that any taxes which must be assessed in order to meet the financial emergency of the Federal Government should be spread over all industries rather than be imposed upon a few, and, whereas, the said Federal taxes on gasoline and lubricating oils are specifically restricted to the period ending June 1, 1933, in the case of gasoline, and June 1, 1934, in the case of lubricating oil;

"Be it resolved, that it is the sense of this meeting that the industry should express its opposition to the extension of the Federal tax on gasoline and lubricating oil; and that it urge the adoption of a general manufacturers' sales tax for the purpose of increasing the revenue of the Federal Government; and that this meeting strongly feels that the balancing of the Federal budget should be brought about so far as may be possible by strict economy in the carrying out of Federal governmental functions."

Other resolutions adopted by the association follow:

Reaffirmed its endorsement of the Fire Marshal's Association of the National Petroleum Association, and urged executives of member companies to support this program in their respective companies.

Commended the officers and directors of the National Petroleum Mutual Fire Insurance Co. for their direction of the company's affairs, and urged greater participation by oil companies in the company.

Ratified the acts of the officers and board of trustees of the association during the fiscal year ended September 1, 1932, and extended a vote of thanks to the officers, directors, councilors, group chairmen and members of the several departments.

Adopted a memorial resolution on the death of Phillip S. Tarbox, who for many years served as a member of the board of trustees and who from 1926 until the time of his death in February of this year served as first vice president of the association.

President Lyons Re-elected

E. M. Lyons, of the Tiona Refining Co., was re-elected president for his sixth consecutive term. With the exception of Charles L. Suhr, who was elected first vice president, filling the vacancy created by the death of Mr. Tarbox, the executive personnel of the association was re-elected and continues unchanged from last year, as follows: N. H. Weber, second vice president; recording secretary, Herbert G. Eaton; assistant recording secretary, E. W. Smiley; treasurer, G. B. Hunter. Fayette B. Dow remains as general counsel for the association, and Willis Crane, who has been traffic attorney for several years, has been advanced to the post of associate counsel. Horace L. Lohnes and Harry S. Elkins continue as attorneys for the association.

Featuring the closing session was an address on the question of public interest and the antitrust laws by Gilbert H. Montague, New York attorney, and organizer and general counsel a few years ago for the Export Petroleum Association, Mr. Montague declared that legal advisers to business had been most remiss and lacking in aggressiveness in not seeking to give their clients the advantage of an evident willingness on the part of the United States Supreme Court to give industry a most liberal interpretation of the terms of the antitrust act as a step toward correcting present disturbed economic conditions, and warned his listeners that business in general has so long delayed getting together to press for a liberalization of the interpretation of various clauses of the antitrust laws that before long it may be placed on the defensive, and called upon to fight against more stringent interpretation of the antitrust laws.

"Currents too deep to be accurately measured are now stirring below the surface in American economic, political and social life," Mr. Montague said, "and it is too early for anyone to venture an opinion as to how they may influence American policy as regards the regulation of business. Competition has until recently been the cornerstone of American economic, social and political philosophy.

"The antitrust laws have endured because they faithfully represented that philosophy. With the course of years these laws have become so firmly imbedded in the economic, social and political life of the nation that many consider them sacred and unchangeable.

"The hesitation of Congress to relax the antitrust laws as repeatedly requested by the Chamber of Commerce of the United States and other spokesmen from the business world, has generally been ascribed to the lack of sustained interest in this subject, and to the absorption of Congress in more pressing legislative issues.

"Can it be that what has seemed to be mere lack of interest is really the reflection of a new desire growing up that these laws be more drastically enforced? Will those who are now agitating for the relaxation of these laws be called upon soon to resist a new agitation to make them more severe?

"Big business and trusts, it must always be remembered, have been the staples of American politics for generations, except for relatively brief intervals. On this problem there is no such thing as a permanent settlement for each generation in American politics has always insisted upon seeking its own solution.

"In the name of business there have been urged upon Congress some strange proposals for permanent and definitive changes in the status of business under government and the law. Does business really want to empower the Federal Trade Commission to dictate what its prices and its profits shall be? Does business really want the Federal Trade Commission to compel every business man to abide by every rule that a majority of his industry may adopt? Does business, as a condition of obtaining advance approval of proposed business arrangements, really want a vastly expanded Federal Trade Commission, with a clutteration of new litigation before the commission and a lot of new Federal Trade Courts?

Supreme Court's Attitude

"On the economic crisis confronting business today some of the deepest and most constructive thinking is coming from members of the Supreme Court of the United States.

" 'The effects of this widespread economic disturbance have had a progressive manifestation,' declared Chief Justice Hughes last January. 'It is the outstanding contemporary fact, dominating thought and action throughout the country. Anything preceding it pertains to a different economic era and furnishes no adequate criterion of present requirements.'

" 'The people of the United States are now confronted with an emergency more serious than war,' said Justice Brandeis last March. 'Many persons think that one of the major contributing causes has been unbridled competition. Increasingly, doubt is expressed whether it is economically wise, or morally right, that men should be permitted to add to the producing facilities of an industry which is already suffering from overcapacity. In justification of that doubt, men point to the excess capacity of our productive facilities resulting from their vast expansion without corresponding increase in the consumptive capacity of the people. They assert that through improved methods of manufacture, made possible by advances in science and invention and vast accumulation of capital, our industries had be-

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come capable of producing from 30 to 100 per cent more than was consumed even in days of vaunted prosperity; and that the present capacity will, for a long time, exceed the needs of business. All agree that irregularity in employment—the greatest of our evils—cannot be overcome unless production and consumption are more nearly balanced.'

"Perhaps we are now at the point," Mr. Montague concluded, "where immediate emergency relief may help more than any delayed legislative masterpiece—where a prompt temporary remedy may be a greater necessity than any postponed statutory utopia—where speed may be more important than absolute perfection—where prolonged discussion may perhaps help very little, but a very little experimentation in the liberalization of the antitrust law may possibly help a great deal."

Taxation Problems

Willis Crane, of the association's legal staff, presented a lengthy summary of the problems arising out of the new Federal taxes on gasoline and lubricating oils, and there was considerable discussion from the floor relative to certain phases of the application of provisions of the excise law to some petroleum products.

Rights of Producers

Fayette B. Dow, general counsel for the association, spoke briefly on the need for continued restraint in operations on the part of the refiners of the country. The drop in total inventories of petroleum in 1930 and 1931, he said, represented a progressive step for the industry as a whole, but was due solely to the restrictive efforts on the part of producers, holdings of refined products increasing in both years. In planning curtailment of refinery operations, he emphasized, refiners must take into account the rights of producers, but intimated that crude production in the Appalachian fields should be cut more nearly in proportion to the curtailed output of other domestic producing areas.

President Lyons' Address

E. M. Lyons, president of the association, in opening the first general session on Wednesday reviewed briefly the history of the organization during the 30 years since its formation, and stressed the progress which had been made in bringing together various interests in the industry for co-operative effort toward betterment of conditions affecting the entire petroleum trade. He deplored the unjust burdens imposed upon the industry by the emergency revenue act of 1932 and advocated a campaign to secure a more equitable distribution of the tax burden through a general sales tax and removal of the nuisance taxes imposed upon the oil industry.

Upon recommendation of the board of trustees, the membership of the association voted to amend Article 13 of the association's constitution, to provide for the creation of associate membership. Hitherto, membership in the association has been limited to refiners, but membership applications will now be received from affiliated divisions of the petroleum industry. The associate membership group, however, will not have voting privileges.

Special committees were appointed by President Lyons as follows:

Auditing committee: Paul Beck, Pennsylvania Refining Co.; H. W. Walkley, Tiona Refining Co.; Rudolph Sonneborn, L. Sonneborn Sons Co.

Nominating committee: J. P. Flynn, Ohio Valley Refining Co.; G. E. Hunter, Emlenton Refining Co.; Paul Blazer, Ashland Refining Co.

Resolutions committee: O. P. Keeney, Wolverine-Empire Refining Co.; N. H. Weber, Pure Oil Co.; Herbert G. Eaton, Superior Oil Works.

Midgley on Fuel Performance

Thomas Midgley, vice president of the Ethyl Gasoline Corp., presented an extemporaneous talk on "Fuel Performance in the Internal Combustion Engine." Advocating closer co-operation between the automotive and petroleum industries, Mr. Midgley said that many problems common to both will continue to come up for consideration as further improvements in engine design develop. Problems relative to volatility are still pressing, he said, and the question of fitting the automobile engine to the fuel available for its operation, and fitting the fuel to the motor still requires close co-operation. Burning characteristics of motor fuel, he said, must be gauged with the same accuracy as volatility, and new improvements in sight in the automotive industry will require further improvements in motor fuel qualities.

The race for high octane number on motor fuel, Mr. Midgley said, is due to the effort on the part of refiners to develop a product to meet the requirements of the new type of high compression internal combustion engines now coming into general use and while considerable progress has been made in stepping up the antiknock characteristics of motor fuels, further improvement will be necessary if the refining industry is to keep pace with the automobile industry.

"The refiner has a certain latitude in improving the antiknock qualities of the motor fuel he produces," Mr. Midgley concluded, "but demand will continue to swing more sharply to the higher knock ratings in motor fuel."

Tax Evasion

A novel feature on the program of the opening session was the presentation of a sound film dealing with the tax problems of the industry, with Paul Hadlick, director of the division of marketing of the American Petroleum Institute, speaking. This presentation was followed by a talk on taxation and tax evasion by Mr. Hadlick, in which he reviewed the campaign now under way to get all state gasoline taxes down to a uniform 2-cent level. The knowledge and experience of the oil industry thus far, he said, leads to the conclusion that a gasoline tax rate of 2 cents is the highest that can be collected with any degree of certainty, with considerable evasion in congested centers of population and in large markets even at the 2-cent rate. Even at a uniform rate of 2 cents, he said, this represents a sales tax of 10 per cent upon the normal retail price, but far below existing rates of from 25 to more than 100 per cent.

Pyke Johnson, of the National Automobile Chamber of Commerce, addressed the convention on "The Purposes of the Newly Organized Highway Users Conference." The conference, a co-operative organization of some 50 trade associations, has for its purpose the encouragement of the development of equitable bases of taxation for the use of public highways and to prevent the imposition of undue burdens upon highway traffic.

Mr. Johnson defended the use of public highways by motor trucks, and presented data to refute various charges against such use, specifically denying that the motor truck is responsible for the present plight of the railroads, that motor truck owners do not pay a fair share of highway costs, and that the motor truck does undue damage to the highway.

At the present time, he said, there are some 3,500,000 motor trucks in the United States, of which some 93 per cent have less than a 2-ton rated capacity. Approximately 86 per cent of these vehicles are privately owned and operated, he said, and the bulk of their tonnage is handled in the short haul field.

"In the main," Mr. Johnson said, "the truck is simply a modern day successor to the horse and wagon, used by its owners as a part of business equipment and engaged in the final distribution of commodities to the consumer."

Election of Trustees

At the annual election of trustees, the board personnel was increased from 18 to 21, the new members being A. F. Carter of Shell Eastern Petroleum Products, Inc., John A. Beck of the Pennsylvania Refining Co. and H. M. Carruth of Canfield Oil Co. Other trustees, all of whom were re-elected, follow: Sheldon Clark, Sinclair Refining Co.; Earle M. Craig, Freedom Oil Works Co.; G. C. Davison, Tri-State Refining Co.; Frank B. Fretter, National Refining Co.; W. V. Hartman, Gulf Refining Co.; W. T. Holliday, Standard Oil Co. of Ohio; O. P. Keeney, Wolverine-Empire Refining Co.; Otto Koch, Kendall Refining Co.; C. J. Leroux, Valvoline Oil Co.; H. A. Logan, United Refining Co.; E. M. Lyons, Tiona Refining Co.; O. D. Robinson, Republic Oil Refining Co.; A. W. Scott, Wolverine-Empire Refining Co.; C. G. Sheffield, Standard Oil Co. of New Jersey; C. L. Suhr, Pennzoil Co.; N. H. Weber, Pure Oil Co.; A. C. Woodman, Richfield Oil Corp. of New York; and R. A. Wotowich, Crew-Levick Co.

An address on the economics of pipe line transportation by Joseph E. Pogue featured the second general session. Mr. Pogue went into the proposed segregation of pipe line systems from the petroleum industry in some detail, discussing the proposed application of the commodities clause of the Interstate Commerce Act to pipe lines.

"The economic consequences of the formation of an independent pipe line system," he said, "would depend upon its structure and the regulations imposed upon it. It may be assumed for the present argument that the proposed system would be composed of competing corporations operating in entire independence of the petroleum industry so far as ownership and control are concerned, and subject to the same regulation by the Interstate Commerce Commission as the present organization.

"The effect upon the petroleum industry as a whole would be that of a major operation, excising an integral function of the industry as now constituted. The process would undoubtedly be expensive, disturbing, and complicated.

"The cost of pipe line transportation would not be decreased, unless the units comprising the new system were directed to combine into fewer companies, thus eliminating surplus lines and raising the load factor of the remaining lines. In such event the degree of competition would be lowered, whereas an important objective of the proponents of the change is to increase competition. In certain directions costs might be higher; to operating charges would have to be added the interest on any debt incurred in establishing the new system.

"The tariffs charged for pipe line transportation, then as now, would be lower than railroad freight rates and higher than pipe line costs. The precise level rates would seek within this range would be determined by competitive conditions. The profits on pipe line transportation would, of course, be transferred from the oil industry, so far as they reside there now, and localized in a new industry.

"Divorced from a correlative interest in the oil business, the new system would become less aggressive in serving new oil fields. This tendency might not be disadvantageous to the industry as a whole at times when new discoveries were made too rapidly, although it would disfavor the interests of small operators in the new areas. In periods when rapid expansion was required the new system would be less responsive to the needs of the oil industry than one geared to the larger undertaking.

"In general, it may be said that the proposal to segregate the pipe lines is based upon an inadequate analysis of the role played by this transportation agency, that the undertaking would be costly and disruptive, and that the economic consequences flowing from the change would not be along the lines contemplated by the proponents of the plan."

The aviation industry will continue to grow in importance as a customer of the petroleum industry, said Col. Clarence M. Young, assistant secretary of commerce, in charge of the aviation activities of the Department of Commerce. From a total consumption of but 3,000,000 gallons of gasoline by the aviation industry in the United States during 1926, he said, business showed a steady expansion, until a total of 30,000,000 gallons were consumed during 1931, and consumption figures for the current year will exceed that total.

The annual dinner this year was an informal affair, held at the Sea View Golf Club, and was one of the best enjoyed banquets held by the association for many years. About 100 attended.

The registration this year approximated 175, a much better showing than at the 1931 convention. There was an unusually large attendance of equipment men toward the close of the meeting, and these latter, after their various contacts with refiners attending the convention, expressed more optimistic views regarding the immediate outlook for new construction and refinery improvements.

Humble Adheres to Announced Policy of Purchasing Half of the Allowable

HOUSTON, Tex., Sept. 19.—Restriction of crude purchases from wells of its connections and reduction of production on its own leases to 50 per cent of the daily allowable was carried out the past week by the Humble Oil & Refining Co. in fields of East Texas, North Texas and the Panhandle in accordance with the company's new policy which became effective September 12.

This program is in line with the previous statement of W. S. Farish, president of the Humble Oil & Refining Co., that his company could not and would not purchase any more crude than it could consume or sell. According to the opinion of company attorneys, the restricted purchase policy does not conflict with the injunction which was recently obtained by the State in district court of Travis County at Austin.

The State Supreme Court on Saturday, on appeal of the Humble Oil & Refining Co. and the Humble Pipe Line Co., temporarily vacated the injunction obtained by the State pending a hearing on the case. Previously a motion by those companies in district court of Travis County at Austin asking that the injunction be set aside was overruled by Judge W. F. Robertson, who had granted the injunction.

The injunction, it was interpreted, was not an injunction in the strict sense of the word but rather a writ of mandamus warning the Humble company that in putting into effect its reduction in purchases it carefully observe the common purchaser act and show no discrimination. According to a statement of company officials, the company had always observed such practice even before passage of the common purchaser law by sharing its outlet ratably with crude customers and will continue such practice.

In connection with the original announcement of the putting into effect by the Humble Oil & Refining Co. of its crude purchase reduction plan, Humble Pipe Line Co. offered to store the unpurchased portion of the production allowables of its connection subject to assessment of gathering and transportation charges and a charge of 2 cents a barrel per month for storage. This offer, however, was withdrawn when the State obtained its writ of mandamus, and the takings of the pipe line company, except as a common carrier, have been restricted to actual purchases and the company's own oil produced on the same basis as the purchased oil. It was the Humble's original plan to run half of its own production to storage along with the unpurchased oil from its connections. However, with the withdrawal of the storage offer for its customers, the company immediately reduced the production of its own wells to the amount of oil purchased from outside wells.

Survey Indicates Oils Have Higher Viscosity, Lower Pourpoint, Poorer Viscosity Index

By W. T. ZIEGENHAIN

The average motor oil sold throughout the middle western states now has a higher viscosity, a lower pourpoint and a poorer viscosity index than the oil sold during the past four years. This conclusion is based upon the average of results determined in the same laboratory on samples of the regularly priced S.A.E. 40 grade of motor oils purchased at stations of the Sinclair Refining Co., Gulf Refining Co., Magnolia Petroleum Co., Phillips Petroleum Co., Mid-Continent Petroleum Corp., Standard Oil Co. (Indiana), Cities Service Oil Co., Vacuum Oil Corp., The Texas Company, and Continental Oil Co., within the middle western states. These samples were collected at random at approximately the same time in each of the four years. The usual care was taken in collecting the sample and testing it typical of a well equipped refinery laboratory and experienced personnel.

These samples were grouped and studied independently from the motor oil samples from those stations selling the products of Pennsylvania refiners, who also have a large representation in the Middle West. This was done for the reason that a competitive situation with respect to the two oils has become so pronounced as to cause the so-called "western refiners" to improve quality and for the Pennsylvania group to shade prices.

In referring to the accompanying table which shows the average tests on all samples taken year by year since 1929, a steady, pronounced increase is shown in the Saybolt viscosity at 100° F. Since all samples were taken from the supply of oil sold as S.A.E. 40 the results from year to year are comparable except that in 1929, some companies had not fully arranged their manufacturing practices to permit the grading of their oils in accordance with the S.A.E. specifications. In 1926 it is interesting to note that the average viscosity at 100° F. was 626. In 1932 this was 911. The increase has approximated 100 seconds each year.

This upward movement was shown in 9 of the 10 companies' samples tested. The samples of company C showed an increase from 456 in 1929 to 1,600 in 1932. The only samples to show a reduction in the viscosity were those of company B, and here it is evident that the company placed stress upon improving the viscosity index instead of building up viscosity.

This trend toward higher viscosities over the four-year period was probably influenced by sales department demands rather than motor demands. Many marketers have reasoned that as higher compression motors were brought into use that heavier lubricating oils would be needed. Technologists have stated that this is not true and because of the lesser waste of heat to be absorbed by the motor and cooling system of the more efficient modern motors that a heavier oil is not necessary. Many papers have been prepared for reading among technical groups which show the fallacy of using oils of higher viscosity than demanded by the motor to insure lubrication.

Other Grades Increased

The trend toward higher viscosities was not only shown in the S.A.E. 40 grade but in other grades as well, although the detailed figures are not included here. To give some idea of the extent of this change, one large refiner in the Mid-Continent area has calculated the weighted average output of his motor oils over the past eight years. The following table was prepared from these data and is intended to reduce to a single numerical value the viscosity of the total output for each year. To explain the manner of arriving at these figures, it should be stated that in each case, the number of gallons was multiplied by the viscosity of the oil at 210° F. and a weighted average calculated for each year's production. The following table might be stated to reflect what the viscosity of the year's output of lubricating oil would have been at this com-

Trend of Lubricating Oil Specifications

AVERAGE OF LABORATORY TESTS MADE ON SAMPLES OF LUBRICATING OILS SOLD AS S.A.E. 40 GRADE AT COMPANY OWNED STATIONS IN MIDDLE WESTERN STATES DURING PAST FOUR YEARS

	1932	1931	1930	1929
S. U. Vis. @ 100° F.	911	830	791	626
S. U. Vis. @ 130° F.	328	317	276	255
S. U. Vis. @ 210° F.	72	70	66	64
V. I.	59	62	71	68
Carbon residue	.66	.66	.68	.60
Emul. S.A.E.	599	330	705	526
Flash °F.	448	445	426	433
Fire °F.	504	508	490	491
Pourpoint	3	5	13	21
Gravity	23.5	23.9	22.7	22.7
Distillation range °F. (at 2 m.m. mercury)				
I. P.	707	708	718	711
5%	756	756	752	749
10%	774	774	770	776
50%	868	868	848	887
70%	935	937	918	949
90%	1,032	1,031	1,040	1,062
Max.	1,107	1,096	1,116	1,143
Samples	11	10	5	10

COMPANY A

	1932	1931	1930	1929
S. U. vis. @ 100°F.	641	650	....	522
S. U. vis. @ 130°F.	247	273	....	209
S. U. vis. @ 210°F.	67	68	....	65
V. I.	81	85	....	76
Carbon residue	.82	.89	....	.15
Color N.P.A.	—8	—6	....	6
Emul. S.A.E.	600	280	....	341
Flash °F.	455	440	....	395
Fire °F.	500	500	....	440
Pourpoint	20	5	....	10
Gravity	25.6	24.2	....	26.1
Distillation range °F. (at 2 m.m. mercury)				
I. P.	712	705	....	612
5%	745	742	....	685
10%	760	756	....	696
50%	862	861	....	840
70%	948	932	....	886
90%	1,055	1,027	....	940
Max.	1,175	1,090	....	990

COMPANY B

	1932	1931	1930	1929
S.U. vis. @ 100°F.	751	805	950	802
S. U. vis. @ 130°F.	297	304	328	308
S. U. vis. @ 210°F.	68	68	69	67
V. I.	64	55	34	50
Carbon residue	.54	.56	.72	.42
Color N.P.A.	—6	—6	—6	—6
Emul. S.A.E.	230	185	1,031	332
Flash °F.	460	445	410	400
Fire °F.	520	510	485	450
Pourpoint	—5	—15	5	10
Gravity	24.8	25.5	21.6	21.0
Distillation range °F. (at 2 m.m. mercury)				
I. P.	716	732	740	725
5%	781	768	760	776
10%	800	783	774	812
50%	874	875	876	930
70%	924	931	946	980
90%	1,020	1,043	1,105	1,073
Max	1,100	1,105	1,210	1,205

COMPANY C

	1932	1931	1930	1929
S. U. vis. @ 100°F.	1,600	935	580	456
S. U. vis. @ 130°F.	530	342	239	199
S. U. vis. @ 210°F.	90	71	60	53
V. I.	45	49	55	79
Carbon residue	.66	.34	.37	.83
Color N.P.A.	—6	6	—6	—7
Emul. S.A.E.	950	292	881	535
Flash °F.	450	455	410	465
Fire °F.	510	520	480	535
Pourpoint	0	10	15	15
Gravity	21.8	23.3	21.5	21.3
Distillation range °F. (at 2 m.m. mercury)				
I. P.	707	740	672	710
5%	764	754	723	743
10%	793	767	750	765
50%	902	855	832	854
70%	965	898	852	915
90%	1,058	976	935	1,030
Max.	1,155	1,095	1,016	1,105

COMPANY D

	1932	1931	1930	1929
S. U. vis. @ 100°F.	846	780	676	598
S. U. vis. @ 130°F.	327	312	263	259
S. U. vis. @ 210°F.	73	71	68	66
V. I.	72	74	93	96
Carbon residue	.87	.83	.83	.68
Color N.P.A.	—7	—6	—6	—7
Emul. S.A.E.	475	180	154	849
Flash °F.	450	450	430	440
Fire °F.	505	500	500	520
Pourpoint	5	15	5	45
Gravity	24.3	24.9	24.3	23.4
Distillation range °F. (at 2 m.m. mercury)				
I. P.	723	658	705	714
5%	755	745	755	742
10%	768	761	780	760
50%	866	870	850	826
70%	952	937	927	870
90%	1,064	1,082	1,029	1,025
Max.	1,125	1,155	1,080	1,090

COMPANY E

	1932	1931	1930	1929
S. U. vis. @ 100°F.	841	760	643	690
S. U. vis. @ 130°F.	325	296	268	287
S. U. vis. @ 210°F.	73	69	66	70
V. I.	75	62	56	89
Carbon residue	.64	.65	.65	.69
Color N.P.A.	6	—7	—7	6
Emul. S.A.E.	300	388	432	305
Flash °F.	450	440	430	455
Fire °F.	505	500	500	510
Pourpoint	0	5	15	15
Distillation range Gravity	25.4	25.5	25.5	25.3
°F. (at 2 m.m. mercury)				
I. P.	722	722	728	725
5%	767	765	748	740
10%	774	765	762	806
50%	843	852	837	915
70%	945	950	922	985
90%	1,066	1,052	1,076	1,115
Max.	1,135	1,113	1,130	1,155

COMPANY F

	1932	1931	1930	1929
S. U. vis. @ 100°F.	...	980	705	731
S. U. vis. @ 130°F.	...	377	293	293
S. U. vis. @ 210°F.	...	79	70	71
V. I.	...	75	52	52
Carbon residue	...	1.01	.53	.70
Color N.P.A.	...	—6	6	6
Emul. S.A.E.	...	302	923	1,200
Flash °F.	...	465	450	445
Fire °F.	...	540	515	510
Pourpoint	...	5	25	20
Gravity	...	24.8	25.2	24.5
Distillation range °F. (at 2 m.m. mercury)				
I. P.	...	758	754	756
5%	...	784	776	780
10%	...	800	787	810
50%	...	900	856	932
70%	...	1,002	938	1,014
90%	...	1,104	1,071	1,145
Max.	...	1,155	1,155	1,215

COMPANY G

	1932	1931	1930	1929
S.U. vis. @ 100°F.	940	945	...	551
S. U. vis. @ 130°F.	335	349	...	319
S. U. vis. @ 210°F.	70	72	...	61
V. I.	42	56	...	61
Carbon residue	.81	.56	...	.61
Color N.P.A.	—4	3½	...	—7
Emul. S.A.E.	190	250	...	814
Flash °F.	435	450	...	420
Fire °F.	500	515	...	485
Pourpoint	0	5	...	25
Gravity	21.4	21.3	...	22.0
Distillation range °F. (at 2 m.m. mercury)				
I. P.	662	622	...	694
5%	767	764	...	758
10%	786	780	...	790
50%	887	890	...	904
70%	988	985	...	955
90%	994	1,005	...	1,000
Max.	1,050	1,059	...	1,170

COMPANY H

	1932	1931	1930	1929
S. U. vis. @ 100°F.	840	847	...	602
S. U. vis. @ 130°F.	322	323	...	264
S. U. vis. @ 210°F.	72	71	...	67
V. I.	67	63	...	90
Carbon residue	.91	.76	...	.97
Color N.P.A.	—7	—6	...	—7
Emul. S.A.E.	300	150	...	355
Flash °F.	455	445	...	440
Fire °F.	505	505	...	495
Pourpoint	0	5	...	25
Gravity	24.6	24.9	...	24.4
Distillation range °F. (at 2 m.m. mercury)				
I. P.	702	720	...	760
5%	749	770	...	795
10%	767	800	...	816
50%	854	866	...	942
70%	975	966	...	1,040
90%	1,074	1,066	...	1,162
Max.	1,125	1,120	...	1,235

COMPANY I

	1932	1931	1930	1929
S. U. vis. @ 100°F.	996	650	...	767
S. U. vis. @ 130°F.	332	248	...	311
S. U. vis. @ 210°F.	72	66	...	72
V. I.	58	84	...	95
Carbon residue	.76	.80	...	1.02
Color N.P.A.	—5	6	...	4-5
Emul. S.A.E.	700	195	...	520
Flash °F.	450	435	...	455
Fire °F.	510	495	...	515
Pourpoint	10	20	...	35
Gravity	23.4	24.3	...	24.7
Distillation range °F. (at 2 m.m. mercury)				
I. P.	702	720	...	762
5%	749	743	...	788
10%	761	755	...	800
50%	856	856	...	910
70%	912	930	...	988
90%	1,020	1,017	...	1,115
Max.	1,110	1,075	...	1,195

COMPANY J

	1932	1931	1930	1929
S. U. vis. @ 100°F.	850	950	...	601
S. U. vis. @ 130°F.	321	320	...	290
S. U. vis. @ 210°F.	65	66	...	54
V. I.	27	15	...	25
Carbon residue	.15	.19	...	.05
Color N.P.A.	—4	3½	...	3
Emul. S.A.E.	1,200	1,050	...	288
Flash °F.	450	425	...	390
Fire °F.	480	495	...	450
Pourpoint	0	—10	...	10
Gravity	20.3	20.9	...	19.5
Distillation range °F. (at 2 m.m. mercury)				
I. P.	707	684	...	650
5%	741	742	...	684
10%	755	765	...	702
50%	820	849	...	808
70%	888	896	...	883
90%	996	938	...	940
Max.	1,060	965	...	1,035

XUM

pany's refineries had all of it been blended together.

WEIGHTED AVERAGE VISCOSITY AT 210° F. OF LUBRICATING OIL MADE AT A LARGE MID-CONTINENT REFINERY

1924	59
1925	62
1926	64
1927	64
1928	65
1929	67
1930	68
1931	69
1932 (8 months)	71

A factor which has been sacrificed for the sake of building up viscosity is that of viscosity index. Because each manufacturer places a different relative value on each specification, and because one specification must some times be sacrificed in order to improve another, it is very apparent that viscosity index has been considered as secondary. The average of the samples taken in 1929 shows a viscosity index of 68. The average this year is 59 and there has been a general decline over the period. In this connection it is interesting to note that an increase is shown over the period in the viscosity at 210° F. In 1929 the average was 64 and this year is 72, which tended to improve the viscosity index, but not enough to overcome the increase in the average viscosity at the lower temperature.

While the average results are shown as outlined here, there are several exceptions, notably in the samples of companies A and B. Company A has increased the viscosity of the oil and also greatly improved the viscosity index.

Carbon Residue

Despite the increase in the viscosity over this period the carbon residue did not show an appreciable change. It may be assumed that a larger percentage of bright stock was blended with the base oils in the more recent year than in 1929 in order to build up the viscosity. If this assumption is correct, it indicated a marked improvement in the quality of the bright stock in this respect.

Gravity

Despite the increased viscosity which indicates a heavier oil, the average gravity increased. Because subsequent distillation results show no marked change in the distillation range of these oils from year to year, the high gravity can only be explained by a more careful selection of lubricants. The crudes yielding a residue of good color and composed of a relatively high percentage of paraffinic hydrocarbons were chosen and these naturally have a higher gravity.

Pourpoint

The most marked change in the various specifications is shown in the pourpoint. Not many years ago, the pourpoint of the average motor oil was 20° F. or above and oils having a pourpoint of 10° F. or less were the exception. It is apparent that considerable emphasis has been placed on this characteristic and the decline in the average from 21 in 1929 to 3 at present emphasizes the efforts exerted.

Distillation Range

It is interesting to note that despite the shifting of important specifications the distillation points have not shown a material change.

PETROLEUM ACCOUNTANTS MEET

The first regular meeting of the fall-winter season for the Petroleum Accountants Society of Oklahoma will take place Thursday, September 22. Nominations are to be received to fill three places on the directorate, the terms of M. H. Massey, C. E. Murray and Charles F. Smith expiring. The program will include a discussion of various methods of steam settlements, minimum amount to be paid for crude oil and gas settlements and the 2-cent Federal tax on checks. R. M. Higgins is to report on the efforts of a committee on uniform operating statement covering gasoline plant operations, and V. P. Wilson, attorney, on legal phase of preferred and secured claims.

Oil Industry Must Decide Again Whether It Will Balance Its Supply With Demand

By J. ELMER THOMAS
Petroleum Analyst, Fort Worth, Tex.

The oil industry must decide definitely, and within the next few weeks, whether or not it is determined to balance supply with demand—whether or not current production is to be held within the limits of current consumption.

Such a policy has been before the industry for consideration ever since the report of the first committee on petroleum economics of the Federal Oil Conservation Board in March, 1930. After much debate, doubt and difficulty the program was endorsed and adopted by a large majority of oil men.

In effect its principles have been in operation ever since that date and there was a draft upon storage stocks in 1930, 1931 and the first half of 1932. At the present time, however, crude is being run to storage and for that reason the price structure is threatening to collapse.

Those who were unconvinced or half-hearted concerning this program have disapproved of those drafts upon storage stocks and have looked askance at the holders of large inventories taking that share of the market demand. They failed to realize that not only does an excess of current offerings put pressure upon the market price but also an excess of storage stocks—an equally available component of supply—exerts the same tendency to depress prices.

Effect of Large Stocks

Those favoring uncontrolled output of crude, wherever and whenever discovered, are living in the past, without any proper evaluation of present conditions. From 1913 to 1923 it was true that attempts to market the supplies of newly discovered flush fields caused swings in price levels only temporary and none too severe in degree.

On the other hand, the rapid discovery and development of enormous new supplies (Southern California, the Texas fault line fields, Smackover, Seminole, West Texas, Oklahoma City and East Texas) in the last 10 years had caused steady increases in storage stocks until the point was reached where not only new flush fields but also heavy inventories exerted adverse market pressure.

Both factors are aided by the drilled and shut-in "potential," however it is rated and whatever it may be. This potential is an inevitable result of any measures for production curtailment which do not retard new drilling, as few measures do except in unitized fields and not always then. This potential is really an asset of the oil industry, rather than a liability, and that would be manifested if a balanced program were universally desired and definitely enforced.

As the merits of a balanced program became more and more apparent during the last two years, attention focused more and more strongly upon these drafts on stocks. Critics failed to recognize that for the most part they represented an accommodation which had been extended to producers by the purchasing agencies during temporary periods of overproduction. In the aggregate they form a part of supply, bought at prices averaging higher than current levels, even exclusive of evaporation losses, interstate charges and insurance.

The producers would be well advised to undersupply the current demand and thus force a draft upon such stocks costing higher prices, which in themselves are a support to the market. Whether or not the owners of these crude stocks desire to reduce their inventories the producers should want them to do so. If this simple point were better understood, much of the objection to a balanced program would be removed.

Another subject of strange criticism is the charge that these measures are designed to improve prices! Neither the producer, consumer nor supervising governmental agencies would hold that products should be furnished below cost. The experience of the last three years has shown clearly that a fair price to the industry is necessary not only for that industry but for the welfare of the country at large.

In the case of an essential natural resource this price should also represent the proper competitive commodity value of that product and such a price can only be obtained by a balanced program. A surplus of tenders amounting to 10 per cent, or even only 5 per cent, will be sufficient to drive prices below economic levels, as has been demonstrated time and again.

Another specious argument sometimes advanced against a planned program is that it cannot be enforced. One might as well say then that we should have no laws because they may be broken and that we should have no taxes because they may be evaded. If the preponderance of public opinion, in and out of the oil business, favors a balanced program the means will be found to enforce it.

During the first half of this year the merit of a balanced program was well exemplified to the oil industry and to the nation. Most of the better managed companies showed fairly satisfactory earnings and nearly all of them, disregarding charge-offs and bookkeeping adjustments, reported a net operating income. And no one arises to argue that too high a price is being charged the public—not for a product upon which the public's agents (legislators) ad a tax of between 100 and 200 per cent of the wholesale price!

Present Uncertainty

Oddly enough—with the record just made during a profound business depression, and in spite of a notable decline in consumption for the first time—at the present time the whole question of a balanced program is highly uncertain. The industry is again entering the six months' period of declining demand and in order to maintain a balance of production and consumption prompt curtailment of output will be necessary. It must be done universally and equably but it is incredible that any considerable portion of the industry should resist it.

And yet in California there is little attention seriously being paid to the reduction in output of 50,000 to 60,000 bbls. daily immediately necessary. In East Texas the allowable output has just been increased 50,000 bbls. daily instead of having been decreased 50,000, as would have been logical. And mutterings come, from some quaint reasoning of retaliation, that if Texas does not restrain herself Oklahoma will be blown wide open!

Let us reach a decision whether we prefer a fair price or a large output; let us hold to profits or yield to a mad scramble for gallonage; let us turn away from technical formulae on physical waste and ask ourselves just why we are in this business. If we favor a balanced program of supply and demand let us apply it primarily and rigidly and finally at the source—crude oil production. And from that point let us move in on the gangsters, racketeers and thieves who are cheating us, evading the laws and deceiving the public.

Oil thefts can be halted, illicit production stopped, tax evasions disclosed and gasoline dilution exposed if the majority of men in the industry are in favor of sanity in operations and integrity in dealings, as of course they are. It should not be necessary to detail rangers or soldiers or detectives to this problem; we know the most about what is going on and we should be able to uncover improper practices.

The Oil Man's Calendar

September

30-Oct. 1—Ponca City, Okla., American Institute of Mining and Metallurgical Engineers, Petroleum Division, Conoco Club.

October

3-7—Buffalo, N. Y., National Metal Exposition and National Metal Congress, and American Society for Steel Treating.

3-7—Washington, D. C., National Safety Council.

4—New York, N. Y., Society of Terminal Engineers, Engineering Society Bldg.

4-6—Toronto, Canada, Society of Automotive Engineers, transportation meeting.

10-14—Atlantic City, N. J., annual convention, American Gas Association.

11-12—Louisville, Ky., Kentucky Petroleum Marketers Association.

20—Excelsior Springs, Mo., National Association of Credit Men, Refiners Division.

25-27—Kansas City, Mo., Four State Convention, Hotel President.

(?) —Chicago, Ill., American Society of Mechanical Engineers (fuel division).

November

10—Los Angeles, Calif., California Natural Gasoline Association.

10-12—Atlanta, Ga., Southeastern Economic Conference.

15-17—Houston, Tex., thirteenth annual meeting, American Petroleum Institute.

December

5—New Orleans, La., tenth annual Asphalt Paving Conference, and Association of Asphalt Paving Technologists.

5-9—New York, N. Y., American Society of Mechanical Engineers.

5-10—New York, N. Y., National Exposition of Power & Mechanical Engineering.

(?) —Great Falls, Mont., Rocky Mountain Oil and Gas Association, Rainbow Hotel.

1933

February-March

15-17—Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

Feb. 27-Mar. 14—Fourteenth Exposition of Chemical Industries, Grand Central Palace, N. Y.

April

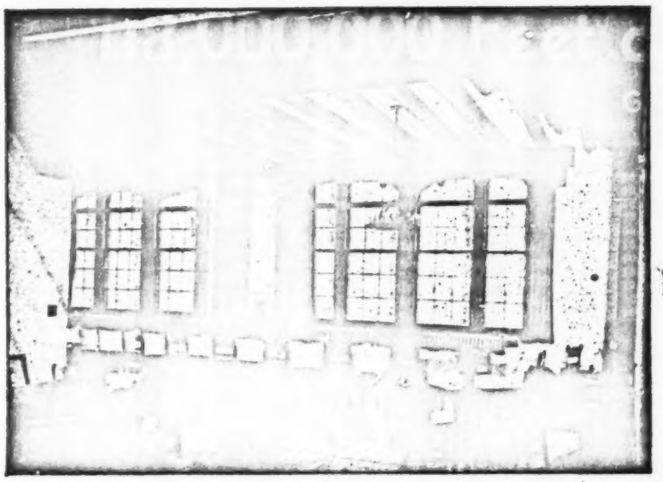
20-21—Cleveland, Ohio, National Petroleum Association, Cleveland Hotel.

Great Interest in Program Will Attract Many to Ponca City, Okla. Meeting

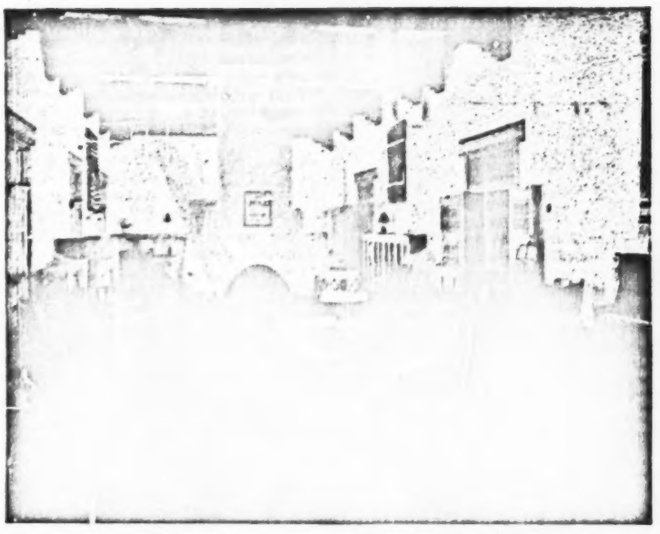
From present indications, the fall meeting of the petroleum division of the A.I.M.E., to be held at the Conoco Club, Ponca City, Okla., September 30 and October 1 will be one of the best attended gatherings of engineers and oil company executives of the year. Special interest in all the subjects listed on the program for discussion, the high calibre of those selected to present the key papers on these subjects and lead the discussions and the fact the meeting will be an open forum with all persons interested, whether they be members of the association or not, permitted to express their opinions—have combined to make this meeting one of utmost importance.

J. Howard Marshall, assistant to the operation and the development of oil pools on the basis of ratable ownership of the oil and gas underlying surface owners' properties; the place of government, state and Federal, in rationalizing mineral production; limitation of production of oil to market demand; and the appraisal of various methods of proration.

E. O. Bennett, chief engineer of the Continental Oil Co., Ponca City, is chairman of the committee on arrangements for the meeting and requests for hotel reservations should be made to him. Mr. Bennett also will arrange reservations for trips through the refineries at Ponca City and to the different oil fields located in that area for those who desire to make these trips. Reduced round trip railroad fares will be available to those attending the meeting from points in Western Passenger Association and Southwestern Passenger Association territories. Many engineers and oil company executives plan to drive to Ponca City for the meeting as the roads throughout the area are reported in good condition.



A section of the main dining room of the Conoco Club



Lounge in the main building of the Conoco Club

dean and instructor in the Yale School of Law at New Haven has accepted an invitation to attend the meeting and present a paper on "Developing United Action and Public Support." In view of the extensive survey made of the petroleum industry by Mr. Marshall for the Yale Law School, his address should be of particular interest.

Present conditions in the oil business make more important than ever the address scheduled to be delivered by W. S. Farish, president of the Humble Oil & Refining Co., on "A Rational Program for the Oil Industry." Other subjects on the program of paramount interest at this time include matters pertaining to unit

JAPANESE-RUSSIAN OIL DEAL?

A delegation of Japanese business men is reported from Berlin to be en route to Moscow to negotiate a petroleum contract with the Soviet Naphtha Syndicate aimed to make the Japanese navy independent of the United States oil supplies.

Texas Proration Is Attacked in Hearing in Federal Court at Houston, Texas

HOUSTON, Tex., Sept. 20.—That proration of East Texas on a uniform per well basis with a set maximum allowable for the field does not prevent physical waste of oil and gas but rather creates waste was the contention presented in testimony of plaintiffs in the suit of a group of East Texas operators who are seeking Federal court injunction restraining the Railroad Commission from enforcing the present proration regulations against their East Texas properties.

Hearing of the case opened before a three-judge Federal court here Monday. Tuesday afternoon plaintiffs still had the stand. The cases of seven different independent oil companies and operators out of a total of 17 suits filed have been consolidated for the hearing. The others will be heard later.

The suit is a continuation of a similar case heard here last May in which a group of operators contested the authority of martial law regulation of proration.

The plaintiffs in this case are seeking to prove that market requirements have governed the adoption of the present proration and not the idea of prevention of actual physical waste as the state law provides. True prevention of waste, their witnesses testified, could be obtained only by a plan based on operation of wells according to gas-oil ratio and by production of wells in proportion to their potential production.

Witnesses for the plaintiffs so far heard include J. S. Hudnall, petroleum geologist of Tyler; Laverne Decker, geologist, Marshall; Herbert Aid, geologist, Tyler; H. H. Yoakum, geologist, Tyler, and Stanley Gill, consulting engineer, Houston. All testified that gas and not water drive, as has been contended by many, provides the chief propulsive force of the East Texas Field. To substantiate this, they contended that the rate of water movement into the reservoir has been considerably less than the withdrawal of oil and hence could not serve as the drive, basing their opinion on the fact that the water table has risen only on an average approximately 2 feet since the field was opened, and that the vertical rise of water is only one-tenth of an inch daily and the lateral movement only from four-tenths to six-tenths of a foot.

On cross questioning by state attorneys as to what filled the space in the reservoir when the oil was withdrawn they explained that it was not water but must be expansion of oil and gas.

The witnesses testified that rate of flow had nothing to do with the ultimate recovery but rather that a faster flow would facilitate greater recovery and conservation, particularly if the flow of wells was continuous and not intermittent as is now forced by reason of the small allowable. Intermittent flow, they claim tended to waste energy as well as to increase the problem of operators. They argued that the only scientific control to prevent waste would be in the conservation of gas by efficient gas-oil ratio with this to be qualified somewhat by relative potentials.

They also contended that it was not necessary to maintain uniform bottomhole pressures throughout the field but only to maintain a uniform rate of decline in individual wells. Their testimony stressed that the sand in East Texas is far from uniform as to permeability and porosity and thus the production and regulation of production by wells must take in these factors in respect to conservation of gas.

Testimony also contended that closer well spacing than that now permitted would increase the ultimate recovery by permitting drilling in tight sand areas to get oil which otherwise could not be drained by more distant wells. They also attempted to show that water conditions could be controlled by correcting individual wells and that larger flows would not result in trapping of oil.

Plaintiffs in the case include People Production, Inc., Bill & Dave Oil Corp., A. S. Palmer, Arthur F. Graf, Alfred Macmillan, C. F. Smith and I. V. Holifield.

Federal Judge Restrains Kansas Commission Order

DENVER, Colo., Sept. 19.—A restraining order against the Kansas Public Service Commission relative to its order effective September 1, which held 30 cents a "reasonable price" for gas distributors to pay pipe line companies, was signed today by U. S. Judge Orrie Phillips.

Two orders were signed. One was brought by nine distributing companies against the commission and Roland Boynton, attorney of the State. The second was brought by the Cities Service Gas Co. against the commission and the attorney general.

The gas distributing companies' order "enjoins an execution of provisions of certain orders of the Public Service Commission and from enforcing or taking any steps to enforce the collection of any fines or penalties provided by the statutes of Kansas for violation of orders issued by the Public Service Commission and from instituting or prosecuting any suit or proceeding."

The orders are those issued by the commission effective September 1, relative to "reasonable price" for the distribution of gas.

The second order enjoins the commission and the attorney general "from bringing any ouster, receivership or dissolution suit or proceeding against the distributing company, and from instituting or prosecuting any suit or proceeding in any court, the purpose of which is to intimidate said distributing company from resorting to the court or coercing them into the acceptance of said orders or to take conduct of their business out of the hands of their respective officers or to prevent them respectively from contesting said order in this or any other court.

The order further recites the distributing companies "are restrained and enjoined from breaching their respective gas purchase contracts with the plaintiff or failing or refusing to pay the respective prices agreed to be paid in such contracts because of the said order of the Public Service Commission and the distributing companies are further restrained and enjoined from entering upon their books as the purchase price of gas bought from the plaintiff a sum of 30 cents per 1,000 feet or any other sum than those contained in their respective gas purchase contracts with plaintiff."

Texas Legislature Passes Its Oil Theft Measure

AUSTIN, Tex., Sept. 20.—The senate today concurred in house amendments to its oil theft bill, excluding pipe lines from terms of the act, thus sending the bill to Governor Sterling's desk.

The house passed the senate bill late Monday, amending it to strike out the transportation of oil by pipe lines from the definition of theft embodied in the bill.

The legislature has passed finally a law to make the failure to pay royalties on oil subject to the penalties of theft.

C. E. PATTERSON DIES

MIDLAND, Tex., Sept. 19.—C. E. Patterson, 28, in the sales department of the Gulf Refining Co., Midland, died of acute indigestion while hunting on September 17. He formerly was in the scouting and land department of the Gulf Production Co. in West Texas.

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No use to make gasoline unless you can sell it

No use to sell it unless you can make a profit

Dubbs cracking is the way to make good gasoline at a profit

You can make it from any charging stock at lowest cost

This is the day of the Dubbs refiner

Universal Oil Products Co
Chicago, Illinois

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The Oil and Gas Journal

PRODUCING REFINING PIPELINE ENGINEERING MARKETING

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The Road to Better Prices

There need be nothing in the talk of a crude price reduction if the facts are faced squarely.

It is admitted that during the past year millions of barrels of excess oil have been placed on the market in violation of the conservation regulations in East Texas and Oklahoma City.

This oil has undoubtedly been sold below the posted price, gasoline made from it has been peddled under the market, weakening the whole price structure of the petroleum industry.

Yet, despite all this, the price of crude has been maintained and the refined market has stubbornly resisted every downward influence. That is the situation today.

But what would be the effect if this flood of illegal oil was stopped, as the Texas legislature and the Texas Railroad Commission and the Oklahoma authorities now seem determined to stop it.

The removal of this excess oil from the market, with all its undermining effects, would inevitably strengthen the entire structure.

Would it not, in fact, create a condition that would call for an increase rather than a decrease in prices?

It has been characteristic of the proration movement since its inception that in each of these recurring crises when things looked blackest and the industry appeared on the verge of utter disaster, a saving remnant of good sense has averted the worst at the last moment and given us a renewed impetus in a fresh start.

It was so in Oklahoma and it was so in East Texas a year ago. Now the announced intention of the Texas authorities to act in the matter of oil thefts gives promise of relief from the existing impasse.

This flood of illegal oil which has threatened to engulf the industry has come upon us, not because it was impossible to prevent it, but because no sufficient effort has been made to stop it.

It has been tolerated in that easy good nature familiar to the industry until it has become too dangerous to tolerate further. East Texans themselves are energetically demanding prevention and should have the full weight of the support of the industry behind them, so there can be no turning back from the announced determination of the commission to stamp out thefts hereafter with all the rigor of the law.

To those who may say this is impracticable it is only necessary to say that it has been impracticable only because it has not been seriously attacked.

It will be a different story when the official power of the State is fully invoked. It is inconceivable that thieves, no matter how cunning, can indefinitely outwit and thwart the forces of the law.

Excuses of insufficient means to cover the territory can be met by providing sufficient means. It will pay the State to provide them because stolen oil is depreciating the value of every barrel on which the State depends for revenue.

Stop the thefts and avert the threat of a price cut, stabilize the market at a reasonable figure, and the State and the oil industry will be immensely the gainers.

The expenditure required to patrol the area will be but a drop in the bucket compared to what can be gained by uprooting this thievery.

As for the oil industry itself, there should be an end to pessimistic foreboding about misfortunes that should never happen.

Instead of assuming that the thieves must continue to dominate the situation and that State and industry must helplessly suffer the consequences let us be sensible and look at it from the other side.

With this stolen oil dammed the weak spot of the whole structure will be removed. With production kept within the allowable there will be no surplus oil thrown on the market at distress prices, no gasoline made from it used to break down the refined market.

The whole picture will be changed. Producers and refiners alike will be able to order their operations in accordance with known demand, with the assurance that there can be no undermining competition popping up to bolster bootleggers and price cutters in their raids upon the industry.

This is no idle fancy, as some cynics may suggest. It is entirely possible and practicable if this cancer of thievery is cut out, and we now have every assurance that the State will do its duty in enforcing the laws against it.

The industry, with that volatility of mind so characteristic of the oil man, has been inclined within the past week or two to plunge into pessimism.

The close of the main consuming season, the decline in consumption, the first we have experienced, and then the threat of an upset in the proration program have all tended to depression.

But, again the darkest hour may be just before the dawn. The very gravity of the situation causes new efforts to be put forth to cope with the problem. Evils that had been thought incurable were found to be eradicable with proper effort and energy.

The somewhat belated action of the Texas Railroad Commission in taking the oil thefts at their real importance is the encouraging note needed at this moment.

It holds out the promise that there need be no fear of a cut in crude prices or the resulting drop in refined prices, and indeed affords logical basis for the hope that with stealing stopped the stabilization of the industry will justify an increase.

Summed up, that is the situation.

Stolen oil is the force that is breaking our markets.

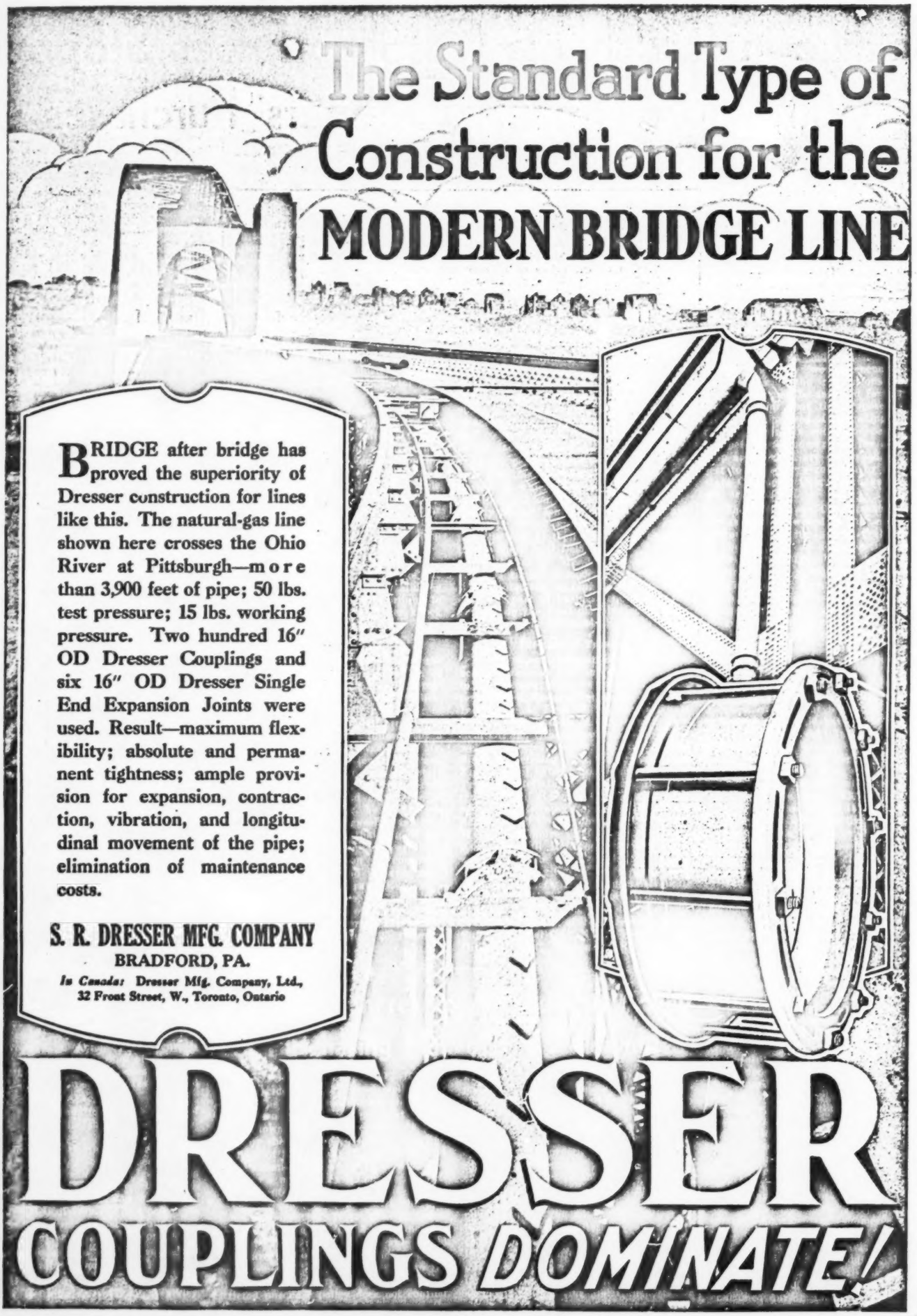
The stopping of stolen oil will remove that danger.

Freed from that threat the industry can put its house in order and stabilize its market structure at a reasonable figure.

Stop the thieves and start the market upward.

XUM

The Standard Type of Construction for the MODERN BRIDGE LINE



BRIDGE after bridge has proved the superiority of Dresser construction for lines like this. The natural-gas line shown here crosses the Ohio River at Pittsburgh—more than 3,900 feet of pipe; 50 lbs. test pressure; 15 lbs. working pressure. Two hundred 16″ OD Dresser Couplings and six 16″ OD Dresser Single End Expansion Joints were used. Result—maximum flexibility; absolute and permanent tightness; ample provision for expansion, contraction, vibration, and longitudinal movement of the pipe; elimination of maintenance costs.

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Decline in Oklahoma Gasoline Prices Stopped With Improvement in Jobbers' Purchases

By C. O. WILLSON

The Oklahoma (Group 3) gasoline market the first of the week showed some improvement over conditions earlier in the month. The downward tendency in prices was stopped the latter part of last week and on Monday and Tuesday fractional advances in quotations were made effective by a few refiners who had been selling under the low of the general market in sales to the trade. This development was in response to better buying on the part of jobbers. Some of the latter apparently had been staying out of the market as much as possible in the belief that a more complete collapse was assured. Their buying, while not heavy, was sufficient to take some distress material off the spot market.

Most market observers were not willing to hazard a prediction as to the permanency of the improvement in motor fuels, although they were willing to concede that the change shown over the past week, despite the continuance of some adverse conditions in the Mid-Continent, is encouraging and indicates strength in the tank car market which many did not think existed. Should the uncertainty regarding the crude oil situation be removed during the coming week, many of the trade believe that prices will recover some of the ground lost in recent weeks.

Another reduction in Mid-Continent bright stock quotations was stopped when it became known on Monday that Pennsylvania refiners had advanced their quotations 2 cents on certain grades. The recent decline in Mid-Continent bright stock prices followed a gradual slump in Pennsylvania quotations and additional reductions were in prospect if the eastern market had not improved.

Other refinery products in Oklahoma were steady. Several refiners reported a greater demand for kerosene and specification material is not plentiful on the spot market, although the trade constantly hears of low-priced material from Texas operators. Although prices have not changed, the demand for wax has improved and two manufacturers have sold their October production. One manufacturer over the past few weeks is reported to have sold in excess of 1,000 tons, the greater part of which was for export movement. There is a firm undertone to the fuel oil, gas oil and furnace oil market.

Refined Market Barometer

Refinery markets for the most part marked time awaiting developments in the crude oil situation centering in Texas. Sellers generally feel that the refinery tank car prices on gasoline and other products have held up remarkably well in view of the uncertainty regarding probable crude oil price trends. Scattered reductions in gasoline tank wagon and service station became effective but no important changes were effective in the refinery tank car quotations in any of the several refining centers. Natural gasolines were stronger in the Mid-Continent and unchanged in California. A more active demand for kerosene was reported from several sections and prices are steady. Furnace oils also were active. Heavy fuels and gas oils were generally unchanged. Paraffin base lubricants were weak although advance in some grades of Pennsylvania grade bright stocks was interpreted favorably by sellers. Petroleum wax more active.

Mid-Continent—Price decline in refinery gasolines stopped. Natural gasoline stronger. Kerosene active. Fair movement of furnace oils. Fuels and gas oil steady. No change in lubricants. Good movement of wax.

East Coast—Major refiners holding gasoline tank car prices although price cutting continues. Kerosene furnace oil demand active. Fair demand for fuels and gas oils. Lubricating oil market unsettled. More active demand for wax.

Pennsylvania—Surprising advance in low cold test bright stocks following steady decline. Neutral oil quotations generally lower. No changes in gasoline and kerosene.

Chicago—Refinery gasoline unsettled and prices lower on some grades. Better movement in kerosene. Steady demand for low cold test fuels and gas oils.

Gulf Coast—Gasoline prices slightly lower due to competition of East Texas. Kerosene unchanged. Bunker fuel oil quotations lowered following East Coast reductions.

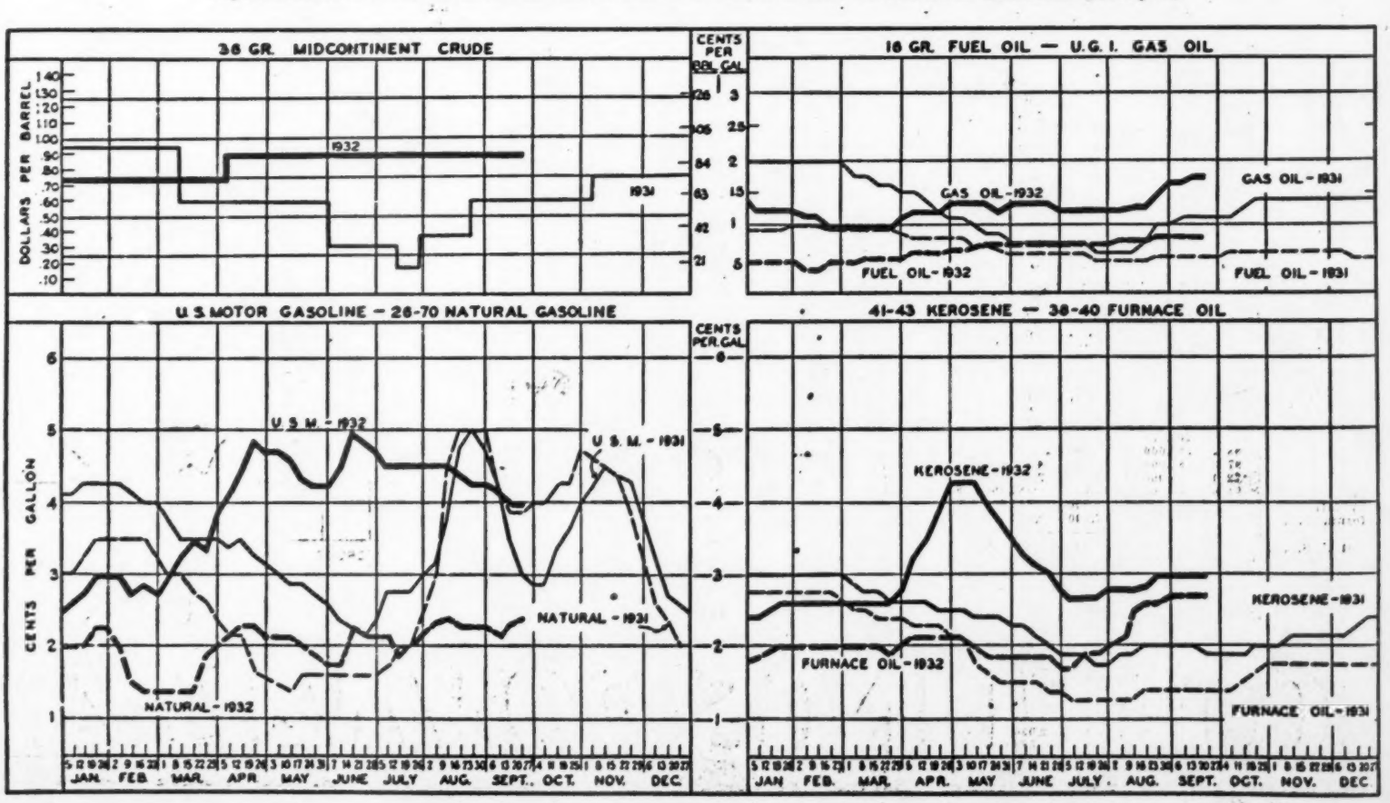
California—Domestic gasoline market weak. No price changes in other products.

New Retail Policy

The action of the Standard Oil Co. of Indiana in withdrawing its Q. D. A. schedule in retail sales of gasoline made effective in August and the substitution of a commercial discount was interpreted favorably in the Oklahoma market and no doubt was partially responsible for the improved tank car buying on the part of jobbers. It has been feared that a general reduction of 1 or 2 cents would be made in tank wagon and service station schedules throughout the Middle West. While the unsettled conditions in the retail gasoline market brought about by the action in August have not been straightened out in all cases, it is assumed that the new commercial discount contract shown on the opposite page will be adopted by other major distributors in the Middle West.

The action in the matter of the quantity discounts was accompanied by reductions in retail gasoline prices on third, regular and premium grades at scattered points in the Standard of Indiana territory including Chicago and several large consuming points. This is interpreted to mean that the Indiana Standard in the future will meet local price conditions with local remedies instead of making general reductions. This policy over the past three or four years has been followed by another Standard

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



XUM

company operating in a contiguous territory with apparent success. This company meets price reductions of competitors as soon as they become known and generally has been able to correct local price cuts without disturbing the general market. The latter is moved up and down with changes in the general oil situation.

This policy has significance not only from the standpoint of the spot tank car market but also in long-time contracts between jobbers and refiners. The refiner who guarantees jobbers local protection in prices may find himself on the losing end of an agreement due to the low prices established by major distributors who are faced with the constant competition of price-cut operators at certain points. At the same time, there will be other areas which will be particularly favorable from the contract end because of the marketing practices of all distributors. Under the new policy these sections will not be disturbed by the operations of other areas where gasoline marketing is largely dominated by price war conditions.

One refiner suggests that this development may mean contracts varying in provisions to cover local conditions. In consuming areas where prices constantly are below normal, jobbers will not receive the same guarantees as other sections where retail prices are maintained in line with refinery costs including the cost of crude oil. This refiner points out that such a policy would aid materially in correcting retail markets by causing the jobber to be more concerned with retail prices and at the same time protect the refiners who too often have "held the sack" while distributors have endeavored to see who could offer the greatest concessions in the retail market.

With some semblance of order in the tank wagon and retail market, the next development needed in refinery tank car markets, is a solution to the Mid-Continent crude oil problem. Stability in the retail market will be of no permanent benefit unless it is shortly accompanied by an adjustment in Mid-Continent crude oil production in line with a decreased demand which is now assured over the next several months.

In this connection partial reports from Middle West states based on gasoline tax collections are not encouraging as to the outlook for gasoline consumption over the next several months. For instance in Iowa the decline in gasoline consumption for the first seven months compared with the same period last year was 14.5 per cent with a drop of 33 per cent in August compared with August, 1931. Minnesota gallonage figures for July show a decline of 27 per cent when compared with the same month last year and Indiana a decrease of 25 per cent.

STANDARD OIL COMPANY
GASOLINE CONTRACT FOR COMMERCIAL TRADE
SERVICE STATION DELIVERIES
MAIN STATION ______ NO. ______
THIS CONTRACT, Made at ______ this ___ day of ______ 193__, by
and between STANDARD OIL COMPANY, hereinafter styled "SELLER," and ______
of ______ hereinafter styled "BUYER,"
Red Crown Ethyl Gasoline
Standard Red Crown Gasoline
This Contract, executed this ___ day of ______ 193__
STANDARD OIL COMPANY
By ______ Buyer Address ______ By ______

New contract offered commercial buyers of gasoline by Standard Oil Co. (Indiana)

Gasoline tax collections do not accurately reflect actual consumption and the July declines are partially due to the fact that jobbers and major companies made large shipments to their bulk stations during June to avoid payment of Federal taxes and then made a corresponding reduction in their July shipments. However, statisticians agree that a decline of 8 or more per cent is assured for the coming fall and winter months compared with the year previous, the actual declines varying with local conditions.

Oklahoma and other Mid-Continent refiners are anxious that crude oil production be curtailed immediately to the point where it will take into consideration both the seasonal declines in consumption and that due to general business conditions. Refiners generally are not seeking lower crude oil price schedules, provided excess supplies selling under the market, are eliminated including crude produced in violation of proration orders and commonly sold as "bootleg" material. The solution of this problem lies largely with East Texas operators and the trade is now watching closely developments in Texas due to their direct bearing on all markets.

Gasoline and Naphtha

At the low point of last week U. S. Motor gasoline of low octane sold for resale at 3½ cents basis Group 3. This material came from Texas refineries. Later in the week the price advanced to 3⅝ cents and the first of this week gasoline from Oklahoma refineries was bringing a low of 3¾ cents with 4 cents the prevailing low quotation on the bulk of sales direct to the trade. Three cases were cited in which refiners selling at 3⅞ cents last week advanced to 4 cents on Monday due to a better demand.

Prices on the higher gravities and low endpoint grades were generally unchanged. These grades are not being forced on the market in Oklahoma and sellers are not having difficulty in maintaining quotations. Sales of 430 and 437 endpoint blending naphthas varying in gravity from 48 to 52 at a high of 4⅛ cents were reported last week.

Kerosene

There was a buying spurt in kerosene over the week. Several of the larger refiners reported a specially heavy movement to their own bulk stations and regular jobber customers. It is said that this reflects the usual fall buying period in which more kerosene is consumed both as tractor fuel and household use. Prices were unchanged from last week.

Furnace Oil

The 32-36 zero low cold test furnace oil commonly classed as gas oil in the trade is now bringing a low of 2⅝ cents with more buyers than sellers in Oklahoma. Sales up to 2⅞ cents are reported.

Natural Gasoline

Considerable improvement in the natural gasoline situation over the week was noted. The market was tight on the regular grades and also the low vapor pressure material.

The 26-70 grade was bringing a low of 2⅝ cents in both Oklahoma and North Texas and sellers felt that a low of 2½ cents would be established before the end of the week. The demand for this grade is coming from both Gulf Coast and inland refineries.

The 18-55 grade was selling at a low of 2⅞ cents with several sales reported at 3 cents. This grade was scarce.

In the low vapor pressure grades, buyers reported a scarcity of material. These grades vary in vapor pressure from 16 to 8 pounds with price differentials also taking into consideration gravity and recoveries. A 15-pound grade with a recovery of 96 or better was bringing a low of 3⅛ cents with 3¼-cent sales reported. The market also was firm in the 11-pound grade at a low of 3¾ cents.

The strength shown in natural gasolines is one of the favorable developments of direct importance in the refinery market. If naturals can be advanced one-half or more cents above their present levels they no longer will be a bearish factor in the refinery market as they have been for several months. With the arrival of colder weather, natural gasoline manufacturers expect the demand for the low vapor pressure grades to broaden in the domestic market among jobbers who have become familiar with the possibilities of the products used either direct as motor fuel or blended with refinery gasolines.

Lubricating Oils

Oklahoma manufacturers were prepared the first of the week to make additional reductions in bright stock and steam refined quotations to meet the lower prices on Pennsylvania refiners. This action was stopped when refiners in latter area advanced their quotations from 1½ to 2 cents per gallon.

American Petroleum Institute Weekly Refinery Statistics

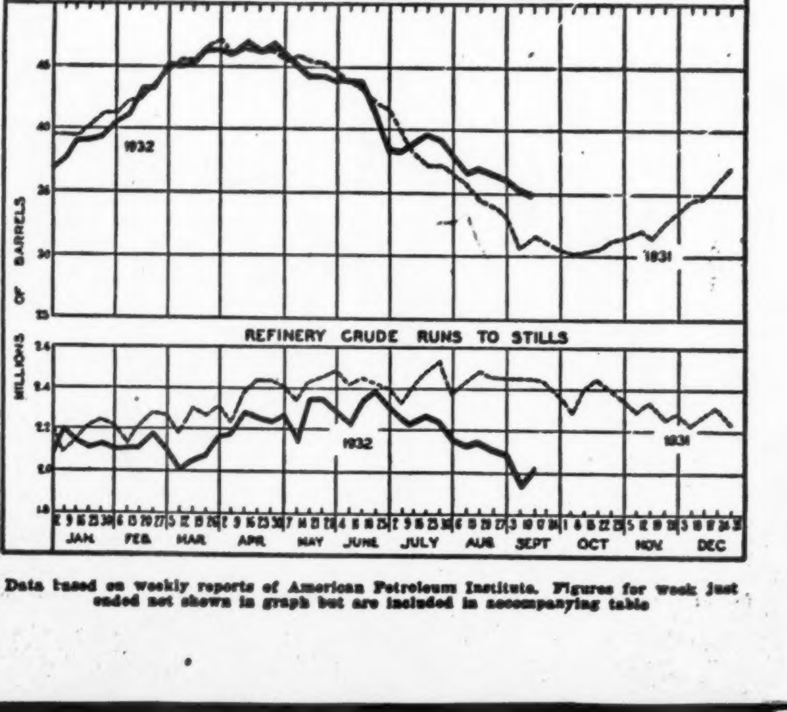
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

Week Ending September 17, 1932, Compared to Week Ago

	Week ending September 17				Week ending Sept. 10, 1932			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	424,000	4,973,000	9,190,000	100.0	418,100	5,090,000	9,365,000
Appalachian	95.0	90,000	1,142,000	998,000	91.8	77,400	1,218,000	1,027,000
Ind., Ill., Ky. ..	97.5	302,000	3,901,000	4,287,000	98.9	279,000	4,145,000	4,282,000
Okla., Kans., Mo.	88.4	207,000	2,945,000	3,279,000	89.6	233,600	3,091,000	3,425,000
Tex. Gulf	98.2	367,000	4,554,000	10,447,000	99.8	329,400	4,649,000	10,176,000
La. Gulf	97.3	81,000	1,354,000	4,364,000	100.0	99,000	1,417,000	4,281,000
Inland Texas ...	72.1	86,000	1,165,000	2,036,000	76.5	102,300	1,149,000	2,085,000
N. La. and Ark..	94.6	45,000	93,000	581,000	97.0	40,300	105,000	604,000
Rocky Mtn.	91.4	37,000	1,446,000	542,000	89.4	32,600	1,519,000	561,000
California	94.6	419,000	12,687,000	99,547,000	96.7	419,400	12,806,000	99,901,000
Total U. S. ...	93.6	2,058,000	34,261,000	135,271,000	95.1	2,031,100	35,189,000	135,707,000

Week Ending September 17, 1932, Compared to Year Ago

	Week ending September 17				Week ending September 19, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	424,000	4,973,000	9,190,000	100.0	497,300	3,935,000	10,799,000
Appalachian	95.0	90,000	1,142,000	998,000	91.8	112,300	1,209,000	1,585,000
Ind., Ill., Ky. ..	97.5	302,000	3,901,000	4,287,000	98.9	336,500	3,828,000	4,924,000
Okla., Kans., Mo.	88.4	207,000	2,945,000	3,279,000	89.6	382,000	2,715,000	5,236,000
Tex. Gulf	98.2	367,000	4,554,000	10,447,000	99.8	380,000	4,493,000	8,137,000
La. Gulf	97.3	81,000	1,354,000	4,364,000	100.0	112,000	530,000	2,299,000
Inland Texas ...	72.1	86,000	1,165,000	2,036,000	.....	132,600	1,173,000	2,345,000
N. La. and Ark..	94.6	45,000	93,000	581,000	.....	54,300	219,000	1,005,000
Rocky Mtn.	91.4	37,000	1,446,000	542,000	89.3	40,700	1,138,000	302,000
California	94.6	419,000	12,687,000	99,547,000	96.5	475,000	11,833,000	96,995,000
Total U. S. ...	93.6	2,058,000	34,261,000	135,271,000	95.0	2,431,700	31,133,000	135,133,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

Standard (Indiana) Offers Contract Available in Ten States Which Others Are Considering

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Sept. 19.—However irking it may be to Standard Oil Co. (Indiana) to be continually in the role of first experimenter in the arduous campaign the industry is making to overcome its many tribulations, the fact remains that, at least temporarily, this company has again cleared up considerably what was for some time becoming an exceedingly muddled situation in the marketing end of the business. Other major companies, as well as Standard, have been occupied with the problem of meeting secret rebates, discounts and other marketing evils, and the first attempt to meet the situation ended in something approaching chaos. The introduction of a contract with automobile users whose requirements of gasoline were at least 100 gallons monthly, a quantity which practically predicated a commercial user, immediately brought on a series of outright price cuts and indiscriminate discounts from the posted service station prices. Now, a second form of contract has been drawn up by the Standard company, and the first contract, above mentioned, will be cancelled as of September 30. The trade is now sitting back, a little more encouraged than last week, to see what will happen.

Standard's Statement

The statement issued by Standard Oil Co. (Indiana) explaining its latest action follows: "After a survey of the situation during the last several days, Standard Oil Co. (Indiana) has decided to discontinue the service station quantity discount plan inaugurated experimentally on August 20. All existing contracts of this kind will be cancelled as of September 30.

"To meet current competitive conditions the company will reduce its service station prices on Red Crown Ethyl and Standard Red Crown 2 cents a gallon in Chicago and Minneapolis. A reduction of 1.8 cents will be made at Des Moines, Iowa. At St. Joseph, Mo., the reduction will be 1.7 cents on Standard Red Crown only. The price of Stanolind, third grade, will be reduced one-half cent at Minneapolis. The price changes will be effective with the opening of business Friday, September 16. Other price adjustments will be made at other points as competitive conditions require.

"In place of the service station discount the company will begin offering under contracts a strictly commercial discount, effective from October 1. This discount will be 1 cent a gallon on Red Crown Ethyl and Standard Red Crown, nothing on third grade, payable on presentation of monthly accumulations of sales tickets or invoices. The contract will cover deliveries only to vehicles owned and operated exclusively by a commercial user of gasoline for commercial purposes. Commercial user is defined as a buyer who 'must operate, have licensed in his own name, and commercially use in his business at least one truck, bus, or cab, and/or a minimum of at least five motor vehicles other than a truck, bus, or cab.' The company will furnish identification cards for each vehicle entitled to receive deliveries. The new type of contract will be cancellable on five days' notice."

These contracts are available in the following states: Illinois, Iowa, Michigan, Minnesota, Indiana, North Dakota, South Dakota, Wisconsin, Missouri and Kansas. A check with other major and semimajor companies finds most of these unprepared to state what their own programs will be. Several have indicated that they believe the Standard's action constructive and free from ambiguity and that they will take similar steps. Others are less cheerful and fear a repetition of widespread price cutting in place of general adoption of the new contract. These latter point out that the contract states that the seller (Standard) "reserves the right to determine in the first instance whether or not the buyer is a commercial user as herein defined," and this, the former believe, is a far-fetched criticism. However, only time will tell and no amount of speculation, it has been discovered, avails for anything.

Retail Price Cut Situation

According to most of the marketers in Chicago district, few contracts are now made with local protection. This fact, it is said at the offices of the principal refiners in the district, has brought a flood of requests from jobbers for help. That this help will be extended is practically certain, according to observers. Although local protection, even when made a part of a contract, is solely at the discretion of the seller, practically all of the sellers have given their customers sufficient assurance of protection when the need should arise. A number of refiners who base their contracts on the general service station structure are breathing more easily now that the expected general downward revision failed to materialize.

Price cuts throughout the territory are numerous, and rapidly on the increase. Saturady alone there were at least 100 new price cuts on the third grade throughout the 11 states, most of these at small points. Recent price cuts at the more important points, in the third grade, are as follows: Service station only, Wichita, cut from 12 cents to 11 cents; St. Louis, cut from 13.6 cents to 11.6 cents in the tank wagon and service station both; St. Joseph, cut from 12.1 cents to 11.0 cents, service station; Grand Rapids, service station cut from 15.5 cents to 14.3 cents; Minneapolis, on September 1, the service station price was cut from 13 cents to 11.9 cents; on September 10 this price was further reduced to 11.4 cents, and on September 16 the price was brought still lower by a half-cent cut.

May Eliminate Price Disparity

Plans are reported under consideration by major and semimajor oil companies to meet the unfavorable developments which follow a series of price cuts in the third grade gasoline at the service station without revisions in the premium and regular grades. A table showing the wide margins between the regular and the third grade gasolines at a number of important points in the territory was presented in these columns some time ago, and it was noted that the difference between the third grade and the premium gasoline was at some places as much as 10.4 cents. There are good indications that the major and semimajor companies are planning to introduce a definite price relationship between the first two grades and the third grade gasoline. It is said that in the beginning the maximum difference that will be permitted between the regular grade and the third grade will be 4 cents, and later this margin will be reduced to 3 cents when conditions permit. That is to say, when the third grade must be reduced to a point where it would be more than 4 cents below the regular grade, the regular and premium grades will be revised downward to maintain the set relationship.

Majors Will Extend on Cuts

Information from authoritative sources is to be the effect that at least one major company, and probably more, have abandoned the policy of taking their time about following price cuts of competitors, and likewise, the policy of ignoring price cut competition in some points as in the past. This company feels that competitors have taken the attitude that they can cut prices and keep them down for a week or more before their lower prices are met, and then they can cut again and when they are finally met for the second time they can raise their prices and everything will promptly return to normal. This company is determined to eliminate this type of activity at once. When a price cut is made it will be met promptly, no matter where the price cut is made, and when the price has been brought down the matter of bringing the price back up will be another matter entirely. This attitude should do much to deter irresponsible price cutters.

Gasoline Consumption Down Sharply

An executive of one of the major companies estimates that in certain large areas, principally in the northern sections, demand for motor fuel has declined as much as 25 to 30 per cent, with the average for the territory at about 18 per cent. This marketer says that some of the oil companies have not given this slump in consumption sufficient attention and have credited their loss in gallonage to the activities of competitors.

Blenders' materials Monday were quoted as follows: 48-50 440 endpoint naphtha, 3⅝ to 3¾ cents for resale; 50-52 437 endpoint, 3¾ to 4 cents for resale. Both of these are below 55 octane. A 52-54 400 endpoint West Texas naphtha of 75 octane, 4¼ cents for resale. This is claimed to be 75 octane material. A Mid-Continent 52-53 430 endpoint naphtha of 64 octane, 4 cents for resale. These sources likewise offer the following gasolines at resale prices: 60-62 410 endpoint of 65 octane, 4 cents; 60-62 400 endpoint, 65 octane material, 4 cents. The reseller adds a quarter of a cent to the price of the first and three-eighths of a cent to the second. It is generally reported that the major and semimajor companies are attempting to bolster the natural gasoline markets and one company is credited with seeking 200 cars of this product. Some purchases have been made, one major having bought 50 cars last week, but there is a strong tendency to discount reports that the companies are seeking to clean up the markets. Natural gasoline prices quoted to the trade Monday in Chicago district are as follows: 15-pound, 3⅝ to 3½ cents; 18-pound, 3¼ cents; 20-pound, 2⅞ cents, and 22-pound, 2⅝ cents. There are few offerings of 11-pound at 3⅞ cents and 9-pound at 4¼ cents.

Gasoline Tank Car Prices

The gasoline tank car markets were probably saved from further recessions last week when the retail end of the business showed definite signs of being cleared up. There was considerable relief among the refiners that a general price cut was not put into effect in the territory. However, it cannot be said that the marketers and refiners are completely at ease, and several adverse developments are quite possible. The crux of the situation appears to be in East Texas in connection with crude oil production and the numerous reports that refiners are able to obtain crude oil at prices considerably below those posted for the field. The situation in Chicago and the rest of the territory, for that matter, will not be settled to the satisfaction of all concerned until the industry learns what is in store for the East Texas producers, and what can be expected from the refiners who are taking this crude oil and promptly turning it into gasoline and other refined products which they must move immediately because of small storage facilities. Crude oil, observers say, is the whole story in a nut shell. Cheap crude (below the posted markets) is accountable for much of the excess gasoline on the market, they say, and this cheap gasoline is bound to react on the crude market. Immediate and drastic curtailment is the only solution.

While there were a number of lower quotations Monday in the gasoline tank car markets, and indications that the low of the ruling U. S. Motor range early this week will be 3¾ cents, the representative quotations Monday were unchanged as to the low, 3⅞ cents, but the high moved down an eighth of a cent to 4 cents. The 60-62 400 endpoint gasoline weakened an eighth of a cent at the low end of the range because of numerous Texas and Mid-Continent offerings and was quoted Monday at 4⅛ to 4⅜ cents. The higher test materials have not been in as good call as expected and weakness is noted, the 64-66 375 endpoint gasoline being quoted a quarter of a cent lower at 4½ to 4¾ cents, and the 68-70 360 endpoint material being offered at 4⅞ to 5 cents.

Naphtha Tank Car Markets

Principal marketers whose naphtha tank car prices have figures as the high of the range have moved down their quotations so that the lows of last week represent the entire markets except in the lacquer diluents. Prices effective today, September 19, are as follows: Cleaners' naphtha, 6 cents, high 6¼ cents; lacquer diluent, 180-250, 7½ to 7¾ cents; lacquer diluent, 140-200, 8½ to 9 cents; lacquer diluent, 180-280, 7¼ cents; rubber solvent, 5¾ cents, high 6 cents; Stoddard solvent, 5½ cents, high 5¾ cents; petroleum thinner, 4¾ cents, high 5 cents; V.M.&P. naphtha, 5¾ cents, high 6 cents. Petroleum spirits was unchanged at 4 to 5¼ cents, prices based on destination.

Kerosene Tank Car Markets

The kerosene tank car markets were showing some betterment due to improved demand although prices are unchanged at 3 to 3¼ cents for the 41-43 water white material, and 3⅛ to 3¼ cents for the 42-44 water white kerosene.

Distillates and Fuel Oils

Distillates and fuel oils were unchanged in price although activity continues slightly off from the peaks reached last month. Resellers and jobbers have apparently stocked up and will probably wait for cooler weather before resuming an active buying position. There is no change in price in any of these products. Reports are current in Chicago district that the industrial outlook is greatly improved and some refiners now are expecting to move larger quantities of the heavier fuels than they expected earlier in the season.

XUM

East Coast Refinery Gasoline Weaker as Price Shading Goes On in Spot Tank Car Sales

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Sept. 19.—Refinery motor fuel markets developed a definitely easier undertone during the past week, under the influence of continued price shading in spot markets. East Coast refiners have made further progress in bolstering the statistical position of their markets, and demand has held up well under the stimulus of more favorable weather, but cheap gasolines, principally from the Gulf Coast, are apparently definitely undermining the market position. Weakness is not confined to New York alone, but extends to the other principal tank car marketing centers on the Atlantic Seaboard. This competition in price is now reaching the point where it is believed that the major refiners will be forced to take definite action to cope with the situation, and a general lowering of posted schedules at refineries, possibly by a full cent per gallon, is looked for in the East.

Refinery Gasoline

The average posted price for U. S. Motor under 65 octane number at principal East Coast refinery and terminal centers is 8 cents per gallon, but outside sellers are reported booking spot business in the tank car market at as low as 6½ cents, with 6¼ cents reported done in isolated instances. With this grade of gasoline available at 5¼ cents and under at the Gulf, the outlook indicates increasing competition and a general slash in posted quotations to meet this competition.

On the high test product, posted prices range 8½ to 8¾ cents per gallon in tank car lots at terminals, but here again price competition is a keen factor, and outside sellers are selling this gasoline from 6¾ cents upwards, an unusually wide margin. This gasoline can be bought at the Gulf at as low as 5⅜ cents in cargo lots. The outlook favors an early downward scaling in posted prices by the major companies on gasoline of 65 octane number and above, as well as on the lower grades.

The statistical position of the market in this area has shown further gains. Refinery holdings on September 10 were 5,090,000 bbls., as compared with 5,441,000 bbls. at the close of the previous week, with bulk terminal stocks at 9,259,000 bbls., against 9,140,000 bbls., and stocks in transit totaling 786,000 bbls. against 1,027,000 bbls. at the close of the previous week. Total visible supplies for the East Coast area as of September 10 were 15,455,000 bbls., against a total of 15,928,000 bbls. at the close of the previous week.

Tank Wagon Gasoline

Gallonage has been exceptionally well maintained throughout the greater part of the territory, under the stimulus of heavy consumption incidental to unusually favorable weather. While no general changes in posted prices developed, the market undertone is weakening in sympathy with the softer refinery market, and price shading is becoming more general. With a cut in refinery posted prices looked for in the near future, it is expected that marketers will immediately follow with reductions in tank wagon and service station gasoline prices.

Fuel Oil

The general reduction of 10 cents per barrel made effective at the start of the week at Atlantic and Gulf Coast ports has readjusted the market to the changed conditions resulting from the recent low prices quoted at the Gulf and in California, and has created a more stable undertone in East Coast markets.

Diesel Oil

The reduction in bunker "C" prices has not been reflected by any change in Diesel oil quotations as yet, and it does not appear evident that any immediate downward scaling in prices is in prospect.

The break in heavy oil prices, it is emphasized, was due more to competitive conditions than to any lowering of costs or weakening surplus of stocks held in the East, and for this reason, refiners state, no cause exists for a comparable reduction in Diesel oil.

The present spread between bunker "C" and Diesel oil, however, is rather wide, amounting to 90 cents per barrel at East Coast ports, and with California Diesel oil reported available at as low as 70 cents a barrel in cargo lots, it is possible that the East Coast market may be forced to a lower level before the close of the year to meet this competition. The present posted price here is $1.65 per barrel, bulk, at terminals, or $1.71½ per barrel f.a.s.

Industrial movement of Diesel oil was along routine lines during the week, with refiners quoting 4 cents per gallon for 26-32 oil in tank car lots, f.o.b. terminals.

Gas Oil

Conditions in this division of the market were much the same as during the preceding week, with the posted price holding unchanged at 4 cents per gallon in tank car lots at terminals, and relatively little price shading being done. Contract movement was active, with shipments going out at a quarter to a half cent under the spot price.

Gulf sellers are quoting 28-30 gas oil at 3 cents per gallon, which does not present any threat to the stability of the East Coast market, but with California refiners quoting 30-34 gas oil at 70 cents per barrel, figuring out approximately 1¾ cents per gallon, more competition is being experienced from that source, and regular shipments of the Pacific Coast product are reaching the East. It is expected that considerable quantities of California gas oil will be absorbed by East Coast markets during the winter months for consumption here as domestic heating oil, which should take some of the selling pressure off the California market.

Petrolatum

Sellers reported some improvement in spot inquiry during the week and the volume of actual new business coming in showed some gains over that of recent weeks.

Paraffin Wax

The market has tightened up further, with sellers now quoting 120-122 a.m.p. at 2⅝ cents per pound, an increase of one-eighth of a cent. Other grades are unchanged. Domestic inquiry has slackened somewhat, following the advances of the previous week, but export demand was still holding up fairly well.

Refiners are cutting down wax production substantially, July production being 31,640,000 pounds, against 36,400,000 pounds in the previous month. Domestic demand, however, fell off to a greater extent, totaling 16,295,000 pounds, against 22,550,000 pounds in June, and stocks on hand at the close of the month totaled 202,023,000 pounds, as compared with 198,407,000 pounds on the same date last year. Production during the first seven months of 1932, however, was substantially in excess of that for the comparable months of 1931, amounting to 283,640,000 pounds, against 259,560,000 pounds, with exports during the period only 118,745,000 pounds, against 152,670,000 pounds during the first seven months last year.

Heating Oil

Tank wagon gallonage in furnace oils is beginning to show some activity, with contract buyers filling their storage for the start of the heating season. Thus far, the tank wagon market has not reflected the recent drop in tank car prices. Most marketers, in their sales contracts, protect their buyers on declines in the wholesale market, giving them the advantage of any lower wholesale price which may develop during the season.

Lubs

Blenders and compounders were coming into the market for low cold test cylinder oils in better volume, and refiners reported some increase in tank car movement. There is still some pressure to sell on the part of eastern refiners, however, and for this reason the market is showing some unsettlement from the price standpoint. The cut in Pennsylvania crude oil during the week also tended to weaken the market undertone.

Export inquiry for cylinder oils is showing more activity, and refiners look for more business in the f.a.s. market during the near future. Export operators are showing some hesitancy in closing business, due to the irregularity of spot markets, and are waiting for the price level to become more stabilized before actually placing buying orders.

Industrial demand for neutral oils was holding up well during the period, and refiners reported that their tank car shipments had shown a little improvement. A number of buyers who filled their storage prior to the effective date of the 4-cents-per-gallon Federal excise tax are now coming back into the market for replacement supplies, and this is making for more activity. Prices were unchanged on all grades.

Gulf Export Market

Increasing interest in export gasoline and kerosene was reported at the Gulf during the week. An inquiry for 10,000 tons of 64-66 375 endpoint was in the market from a French buyer, for October shipment. Another inquiry from France was for 5,500 tons of 64-66 375 endpoint, and 500 tons of water white kerosene, also for October shipment. Prices at the Gulf are unchanged, but are nominal and with an easy undertone. As opposed to the posted price of 5 cents per gallon, f.o.b. Gulf, on 64-66, a 6,000-ton cargo was reported sold by an American supplier for France at 4⅞ cents per gallon, c.i.f. Havre, which figures out a netback considerably under the present nominal posted level.

Interest in East Texas crude for export has dropped sharply, due to reports of possible early price cuts in the field, and foreign buyers are standing by pending further developments in the price situation. Two cargoes were reported as having been closed early in the week, for September-October shipment, to France at $1.08 per barrel, f.o.b. Gulf, which is considerably under the regular market, which figures out at over $1.30 a barrel f.o.b. Gulf, taking the posted price in the field as a base.

Petroleum Exports

There was some recovery in export movement of refined products reported from the local port, and it was indicated that an early resumption of intercompany shipments abroad would result in a substantial increase in export movement locally during the remainder of the year.

The following table shows exports of principal refined products from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	Sept. 10	Sept. 3	Aug. 27
Gasoline	30,000	.....	40,000
Naphtha	490,000	.....	120,000
Kerosene	40,000	8,000	28,000
Fuel and gas oil	25,000	65,000	325,000
Lubricating oil	1,115,000	485,000	455,000
Petroleum, ref'd.	498,000	8,000	280,000
	Pounds		
Petrolatum	8,000	120,000	15,000
Paraffin wax	775,000	675,000	770,000
Refined	130,000	450,000	70,000
Scale	15,000	15,000	215,000
Lub. grease	625,000	572,000	535,000

There were several inquiries for clean tankers reported in the charter market during the week, indicating a heavier export movement of refined products during the next 60 days from the North Atlantic, from the Gulf, and from California. In addition, sellers were looking for the closing of several additional cargoes of East Texas crude for shipment to France during the closing quarter of the year. Lub oil inquiry from abroad likewise has shown a little improvement, although no cargo business is in sight at the moment.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended September 10 totaled 660,000 bbls., a daily average of 94,286 bbls., as compared with a daily average of 86,857 bbls. for the previous week and a daily average of 98,071 bbls. for the four weeks ended September 10.

Imports were received at only two ports during the week, 516,000 bbls. coming into New York and 144,000 bbls. into Philadelphia. The week's imports comprised 403,000 bbls. of crude petroleum and 257,000 bbls. of fuel oil.

The reduction in posted prices for fuel oil at Atlantic and Gulf Coast ports this week is expected to be reflected by an early falling off in imports of this oil.

California Oil Receipts

There were no receipts of California crude or refined petroleum reported at Atlantic or Gulf Coast ports during the week. Receipts during the previous week were 217,000 bbls. a daily average of 31,000 bbls. for the week, and receipts for the four weeks ended September 10 averaged 30,464 bbls. per day.

At the close of the week, three cargoes of California refined products were reported afloat for the East Coast, as follows:

Tanker Betterton (Associated Oil Co.) with 80,000 bbls. of kerosene for Tiverton, R. I.

Tanker Mercury Sun (Sun Oil Co.) with 117,000 bbls. of gasoline for Perth Amboy, N. J.

Tanker Northern Sun (Sun Oil Co.) with 117,000 bbls. of gasoline for Philadelphia.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21.

Gasolines

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04	.04½	.04	.04½
60-62 400	.04½	.04½	.04½	.04½
64-66 390	.04¾	.04¾	.04¾	.04¾
64-66 375	.04¾	.04¾	.04¾	.04¾
68-70 350	.04¾	.05	.04¾	.05
NORTH TEXAS—				
*U. S. Motor	.03¾	.04	.03¾	.04
60-62 400	.04	.04½	.04	.04½
64-66 390	.04½	.04¾	.04½	.04¾
64-66 375	.04¾	.04¾	.04¾	.04¾
64-66 360	.04¾	.04¾	.04¾	.04¾
†NORTH LOUISIANA—				
*U. S. Motor	.04½		.04½	
60-62 400	.04¾		.04¾	
†ARKANSAS—				
*U. S. Motor	.04½		.04½	
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.03¾	.04½	.03¾	.04½
60-62 400	.04½	.04¾	.04½	.04¾
64-66 375	.04½	.04¾	.04¾	.05
Aviation fighting grade	.05	.05¼	.05	.05¼
68-70 360	.04⅞	.05⅛	.04⅞	

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On September 20, in the case of the U. S. Motor and 60-62 400 endpoint grades, where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06¼	.06½	.06¼	.06½
60-62 400	.06½		.06½	
64-66 375	.06¾	.07	.06¾	.07
68-70 350	.07		.07	

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas:

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.05¼	.05¾	.05¼	.06
58-60 400	.06	.06¼	.06	.06¾
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.08	.08¼	.08	.08¼
Boston	.08¼		.08¼	
Baltimore, Md.	.08¼		.08¼	
Charleston, S. C.	.08¼		.08¼	
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.08½	.08¾	.08½	.08¾
Boston	.08¾		.08¾	
Baltimore, Md.	.08½	.08¾	.08½	.08¾
Charleston, S. C.	.08¾		.08¾	
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05¼	.05½	.05¼	.05½
U. S. Motor, below 65 octane number	.05		.05	.05¼

Naphthas

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
50-52 450 (blending)	.04⅛	.04¼	.04⅛	.04¼
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.06¼	.06½	.06¼	.06½
ARKANSAS—				
48-50 450 (blending)	.04¼	.04½	.04¼	.04½
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04¼	.04½	.04¼	.04½
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06		.06	.06¼
Lacquer diluent, 180 i.b.p.-250 e.p.	.07½	.07¾	.07½	.07¾
Lacquer diluent, 140 i.b.p.-200 e.p.	.06½	.09	.06½	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.05¾		.05¾	.06
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.05½		.05½	.05¾
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.04¾		.04¾	.05
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.05¾		.05¾	.06
Petroleum spirits	.04	.05¼	.04	.05¼

Natural Gasolines

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
Grade 18-55	.02⅞	.03	.02¾	.02⅞
Grade 26-70	.02¾		.02⅞	
Grade 30-70	.02¼		.02¾	
*Low pressure grades:				
15 lb. v.p. (max.)	.03½	.03¾	.03½	
11 lb. v.p. (max.)	.03¾	.03⅞	.03¾	.03⅞
NORTH TEXAS—				
Grade 18-55	.02⅞		.02¾	
Grade 26-70	.02¾		.02½	
Grade 30-70	.02¼		.02¾	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03¼		.03	.03⅛
11 lb. v.p. (max.)	.03¾		.03¾	
NORTH LOUISIANA—				
Grade 26-70	.02¾		.02½	
CALIFORNIA—				
75-78 375	.04	.05	.04	.05

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All low vapor pressure grades have minimum recovery of 96 (natural gasoline method.)

Kerosenes

(All kerosenes water white)

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
41-43	.03	.03½	.03	.03½
42-44	.03½	.03¾	.03½	.03¾
NORTH TEXAS—				
40-41	.02¾	.02⅞	.02¾	.02⅞
41-43	.02⅞	.03	.02⅞	.03
†NORTH LOUISIANA—				
41-43	.03½		.03¾	
42-44	.03¾		.04	
†ARKANSAS—				
41-43	.03½		.03¾	
PENNSYLVANIA (inland refineries)—				
45	.04½		.04½	
46	.04¾		.04¾	
47	.04⅞		.04⅞	
CHICAGO (Based on Group 3)—				
41-43	.03	.03½	.03	.03½
42-44	.03½	.03¾	.03½	.03¾
*CALIFORNIA—				
38-40 high burning test	.04	.04¾	.04	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05½	.06	.05½	.06
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04½

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
39-40 prime white	.02⅞	.03	.02¾	.03
38-40 light straw	.02¾	.02¾	.02⅝	.02¾
NORTH TEXAS—				
38-40 light straw	.02⅝	.02¾	.02⅝	.02¾
CHICAGO (Based on Group 3)—				
38-40 light straw	.02⅞	.03	.02⅞	.03
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04¼		.04¼	

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
32-36 straw	.02⅝	.02¾	.02½	.02⅝
36-38 straw	.02¾		.02¾	.02¾
38-40 straw	.02¾	.03	.02¾	.02⅞
39-41 prime	.02¾	.03	.02⅝	.03
NORTH TEXAS—				
38-40 straw	.02⅝	.02¾	.02⅝	.02¾
†NORTH LOUISIANA—				
36-40	.03	.03½	.03	.03½
†ARKANSAS—				
32-36	.03		.03	
CHICAGO (Based on Group 3)—				
32-36 straw	.02⅝	.02¾	.02½	.02⅝
38-40 straw	.02⅞	.03	.02⅞	.03
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03½		.03½	
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	
21 (industrial)	.03½		.03½	

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.01¾	.01⅞	.01¾	.01⅞
U.G.I. (G.O.)	.01¾	.01⅞	.01¾	.01⅞
32-36 zero to 15 (G.O.) high flash	.02½	.02¼	.02	.02½
28-30, zero to 10	.75	.77½	.75	
26-30, zero to 10	.70		.70	
24-26	.47½	.52½	.47½	.52½
20-22	.45	.50	.45	.50
16-20	.40	.45	.40	.45
Below 16	.37½	.40	.37½	.40
NORTH TEXAS—				
32-36 (G.O.) industrial	.01⅝	.01⅝	.01⅝	
22-26	.35	.40	.40	.45
Below 20	.35	.40	.35	.40
NORTH LOUISIANA—				
32-36 (G.O.) zero	.02½		.02¼	
14-16	.35	.40	.35	.40
†ARKANSAS—				
32-36 (G.O.) zero high flash	.02½		.02¼	
14-16	.35	.40	.35	.40
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01⅝	.01¾	.01⅝	.01¾
28-30 (zero)	.77½	.82½	.77½	.82½
22-26	.55	.60	.55	.60
18-22	.45	.50	.45	.50
Below 18	.30	.35	.30	.35
PENNSYLVANIA (inland refineries)—				
36-40	.03¼		.03¼	

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.70	.85	.70	.85
27 plus Diesel	.70	.85	.70	.85
15-19 bunker (at sidewater)	.55	.65	.55	.65
15-19 (cargo lots)	.50	.60	.50	.60
15-19 (tank car)	.40	.60	.40	.60
GULF COAST—				
28-30 (G.O.)	.03½	.03½	.03	.03½
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.55	.60	.55	.60
Bunker C (bunkers)	.60		.70	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
26-30 Diesel (tank cars)	.04		.04	
†Bunker C	.75		.75	

*Lighterage 6½ cents per barrel.

†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	4.00	4.50	4.00	4.50
Still runs	4.25	4.50	4.25	4.50
Lump and egg	7.00		7.00	

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

	Sept. 20		Sept. 13	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09½	.09¾	.09½	.09¾
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¾	.10¾	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13
500-4.5	.13¼	.13½	.13¼	.13½
100-2 paraffin oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-8	.07¾	.08	.07¾	.08

20-4	.07½	.07¾	.07½	.07¾
20-3	.09½	.09½	.09½	.09½
20-4	.08¾	.09	.08¾	.09
20-3	.10¾	.11	.10¾	.11
20-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.14	.15	.14	.15
10 pour test	.13	.14	.13	.14
15 pour test	.11½	.12	.12½	.13
25 pour test	.10½		.11½	.12
30 pour test	.10½		.11½	.12
180 vis., No. 3, 25 pour test	.13½	.14½	.14	.15
200 vis., No. 3:				
Zero pour test	.20	.22	.20	.22
10 pour test	.19	.20	.18	.20
15 pour test	.17	.18	.17	.18
25 pour test	.16	.17	.16	.17
30 pour test	.16	.16½	.16	.16½
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		.06½	
20-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,250-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
200-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10
2,000-6 plus	.11	.11½	.11	.11½
CALIFORNIA—				
Pale Oils:				
100-2½-2	.07¾	.08	.07¾	.08
200-2½-3	.07¾	.08	.07¾	.08
300-3-3½	.08¼	.08½	.08¼	.08½
350-3-4	.08¾	.09	.08¾	.09
400-3-4	.09½	.09¾	.09½	.09¾
450-3-4	.09¾	.10	.09¾	.10
550-3-4	.10¼	.11	.10¼	.11
Red Oils:				
200-4½-5	.07	.07½	.07	.07½
200-5-6	.07½	.07¾	.07½	.07¾
350-5-6	.07¾	.08	.07¾	.08
400-5-6	.08	.08¼	.08	.08¼
450-5-6	.08¼	.08½	.08¼	.08½
500-5-6	.08½	.08¾	.08½	.08¾
600-5-6½	.08¾	.09	.08¾	.09
700-6½ plus	.09	.09¼	.09	.09¼
750-6½ plus	.09	.09½	.09	.09½
900-6½ plus	.12	.13½	.12	.13½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Sept. 20		Sept. 13	
630 light green	.07¾	.08	.07¾	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stock:				
190-200 D	.18		.18	
150-160 D, 0-10	.17		.17	
150-160 D, 10-25	.16½		.16½	
150-160 D, 25-40	.16		.16	
150-160 E	.16		.16	
PENNSYLVANIA—				
600 S. R.	.12½	.13	.12¾	.13
650 S.R.	.14½	.15½	.15½	.16
600 Pennsylvania flash	.15¾	.16½	.16½	.17
630 D filtered	.20¾	.21½	.22	.22½
600 E filtered	.15¼	.15½	.15¼	.15½
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis. 210-540-550 flash:				
10 pour test	.20½	.27½	.25	.26
15 pour test	.24½	.25½	.23	.24
25 pour test	.19½	.21	.20	.22
35 pour test	.19½	.21	.19	.20

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Sept. 20		Sept. 13	
124-126 white crude scale	.01⅝	.01¾	.01⅝	.01¾
PENNSYLVANIA—				
122-124	.01⅞		.01⅞	
124-126	.02		.02	
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅝		.02½	
125-127	.02⅞		.02⅞	
130-132	.03⅜		.03⅜	
133-135	.04½		.04½	
135-137	.04½		.04¾	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02¼		.02¼	
Extra amber	.02½		.02½	
Cream	.04¾		.04¾	
Lily white	.05½		.05½	
Snow white	.06½		.06½	

Export Prices

GASOLINE				
GULF COAST—	Sept. 20		Sept. 13	
U. S. Motor	.04½		.04½	
60-62 400	.04½		.04½	
61-63 390	.04¾		.04¾	
64-66 375	.05		.05	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55, 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05½		.05½	
U. S. Motor, 69 octane num.	.05½		.05½	
58-60 400 endpoint gasoline.	.04¼	.05	.04¼	.05
KEROSENE				
GULF COAST—				
41-43 prime white	.04¾		.04¾	
41 water white	.04½		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.03¾	.04½	.03¾	.04½
LUBRICANTS				
NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.21	.22	.21	.22
650, steam refined	.24	.25	.24	.25
600, Pennsylvania flash	.24½	.25	.24½	.25
630, Pennsylvania flash	.29	.30	.29	.30
600, Warren E	.23½	.24	.23½	.24
600, Oil City E	.22½	.23	.22½	.23
Light 140-150 bright stocks.	.32	.33	.32	.33
Dark 140-150 bright stocks.	.30	.31	.30	.31
NEW YORK (f.a.s.) (in bbls.)—				
600 filtered	.20½	.21	.20½	.21
600 Warren E	.23	.23½	.23	.23½
600 S.R. unfiltered	.20	.21	.20	.21
650 S.R. unfiltered	.23	.24	.23	.24
600 flash S.R.	.24	.25	.24	.25
630 flash S.R.	.29	.30	.29	.30
Bright stock, No. 8 color	.31	.33	.31	.33
Bright stock, No. 6½ color, dil.	.29	.31	.29	.31
NEUTRAL OILS				
NEW YORK—Pale Engine Oil, Bulk (vis. at 100):				
230-3¾	.10	.10¼	.10	.10¼
180-3½	.09½	.09¾	.09½	.09¾
100-2½	.05½	.06	.05½	.06
Red Engine Oil, Bulk (vis. at 100):				
300-6½	.09½	.09¾	.09½	.09¾
250-6	.09	.09¼	.09	.09¼
200-6	.08¼	.08½	.08¼	.08½

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (Apr. 1, 1932)†	$ .98
East Texas (Apr. 11, 1932)‡	.98
Corsicana heavy*	.64
Other fields	See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

Eastern States

JOSEPH SEEP PURCHASING AGENCY (Effective September 13, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$1.87
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.87
Penna Grade Oil in Eureka Pipe Line Lines	1.52
Penna Grade Oil in Buckeye Pipe Line Lines	1.37
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Apr. 26, 1932)	1.06
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 16, 1931)	.60

PENNZOIL CO. (Effective September 13, 1932)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$1.82
Group B (Includes Titusville district.)	1.81
Group C (Includes Turkey and Tidiout districts.)	1.80
Group D (Includes Bear Creek and Forkey districts.)	1.79
Group E (Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	1.77

TIDE WATER PIPE CO. (Effective September 13, 1932)

Bradford, Pa.	$1.87
Allegany, N. Y.	1.87

PURE OIL CO. (Effective September 13, 1932)

Cabin Creek, W. Va.	$1.52
Bradford Hollow, W. Va.	1.52
Kelly's Creek, W. Va.	1.52

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties....See gravity table

Rocky Mountain States

OHIO OIL CO.-MIDWEST REFINING CO.

Bas, light (Aug. 24, 1931)	$ .75
Bas, heavy (Aug. 24, 1931)	.53
Fort Collins (Apr. 11, 1932)	.86
Florence (Apr. 11, 1932)	.90
Wellington (Apr. 11, 1932)	.76
Grassewood Dome, Colo. (Apr. 11, 1932)	1.00
Dutton Creek (Apr. 11, 1932)	.82
Rock Creek, Wyo. (June 1, 1932)	.90
Frannie, light (Nov. 3, 1931)	.61
CRUDE OIL PRICES—	
Frannie, heavy (Nov. 3, 1931)	.51
Salt Creek	Mid-Continent gravity table
LaBarge	Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932)	.98
Grass Creek (June 1, 1932)	1.10
Elk Basin (June 1, 1932)	1.10
Lance Creek (Apr. 11, 1932)	1.15
Poison Spider (Mar. 5, 1931)	.70
Notches (Mar. 14, 1927)	.65
Hudson (June 3, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage (Apr. 16, 1931)	.98
Lost Soldier (Apr. 12, 1932)	.80
Hamilton Dome (Nov. 3, 1931)	.45
Greybull (Apr. 11, 1932)	1.20
Cat Creek (Apr. 11, 1932)	1.20
Pondera (Nov. 3, 1931)	.90
Sunburst, Mont. (Apr. 11, 1932)	1.05
Hogback, N. Mex. (Aug. 24, 1931)	.80
Border, Mont.	1.55
Red Coulee, Alberta	1.55
Lea County, N. Mex. (Apr. 1, 1932)*	.65
Maljamar (Apr. 11, 1932)	.60
Artesia-Jackson (Apr. 11, 1932)	.65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

*Posted by The Texas Company, Humble Oil & Refining Co. met this price effective April 11.

West Texas

Iatan and Westbrook	Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties*	$ .65
Lea County, N. Mex. (See Rocky Mountain States.)	
Toborg, Pecos County (Apr. 11, 1932)†	.55

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company, Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. and Stanolind Oil & Gas Co. in Winkler County. †Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers .....See gravity table

Jennings, La. (Apr. 11, 1932)*	$ .75
Lockport, La.	See Gulf Coast gravity table
Refugio, light	See gravity table
Refugio, heavy (Apr. 11, 1932)‡	.50
Markham (Apr. 11, 1932)§	See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)§	See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum

(Continued on Next Page)

Crude Oil Gravity Table

	Kansas and Oklahoma	North and Central Texas	East Central Texas	Gray County, Texas	Carson, and Hutchinson Counties, Texas	Salt Creek and LaBarge, Wyoming	North Louisiana and Arkansas	Gulf Coast (Texas-Louisiana)	Cameron, Meadows, Louisiana	Leva and Lockport, Louisiana
	1	2	3	4	5	6	7	8	9	10
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.72	.82
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over.	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 25 degrees, 67 cents; 25-25.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Derby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 66 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co., effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, Continental Oil Co. and Gulf Pipe Line Co. met Magnolia Petroleum Co. prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Stanolind Oil & Gas Co. (in Pine Island and Pleasant Hill and in Marion County, Texas) and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents. Humble Oil & Refining Co., effective July 18, 1932, posted following prices for Conroe crude: 25-25.9 degrees, 90 cents; 26-26.9 degrees, 92 cents; 27-27.9 degrees, 94 cents; 28-28.9 degrees, 96 cents; 29-29.9 degrees, 98 cents; 40 and above, $1.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 29)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

September 20, 1932

TAXES

The gasoline quotations given in the following tables include the 1-cent Federal tax as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is generally available at 1.5 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 3 cents above the service station price for the regular grade.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago	15.5	15.1	4.0	10 0
Decatur, Ill.	17 6	17.6	4.0	10.1
E. St. Louis	16 9	16.9	4.0	9.3
Joliet	17.6	17.6	4.0	8.6
Peoria	17.6	17.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17.7	17.7	4.0	10.4
Des Moines	17.7	16 9	4.0	8.0
Keokuk	17.7	17.7	4.0	10.4
Sioux City	17 3	17.3	4.0	10.0
Duluth, Minn.	18 7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	8.1
Minneapolis	18 4	18.4	4.0	11.0
LaCrosse, Wis.	19 4	19.4	5.0	11.1
Milwaukee	17 3	17.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	12 6	12.6	4.0	8.0
Grand Rapids	17 5	16 5	4.0	10 2
Saginaw	16.6	15 6	4.0	10.6
Evansville, Ind.	18.2	18.2	5 0	†12.9
Indianapolis	18.4	18.4	5.0	†14.1
South Bend	18 7	18 7	5 0	†14.4
Fargo, N. D.	20 1	20.1	4.0	12 0
Huron, S. D.	19.5	19.5	5.0	11 5
Sioux Falls	19.0	19 0	5.0	10 0
K. C., Mo.*	15 1	15.1	4.0	8.7
Springfield*	17.0	17.0	4.0	8 0
St. Louis*	14 6	14 6	4.0	7 5
St. Joseph*	16.7	15.0	4.0	7.5
Wichita, Kans.	15 9	14 0	4.0	7.0
Bartlesville, Okla.	15.5	15.0	5.0	8.0

*State tax 3 cents, 1-cent city tax and 1-cent Federal tax.

†Includes 4-cent tax. Buyers of kerosene not used as motor fuel can secure refund of tax.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective July 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 6 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 5.50 cents; No. 3 (22-26 zero), 200 gallons or more 4.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 6½ cents and 8 cents; 32-36, 6 cents and 7½ cents; 28-30, 5¾ cents and 6¾ cents; 24-26, 4½ cents and 5½ cents; 18-22, 4¼ cents and 5¼ cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	13.5	16.0	5.0	7.0
Fort Worth	13 5	16 0	5.0	9 0
Houston	13 5	16.0	5.0	8.0
San Antonio	13.5	16.0	5.0	9 0
El Paso	15.0	17.0	5.0	11.0
Texarkana	*13.0	*15 0	5.0	†11.0
Muskogee, Okla.	11.5	14.0	5.0	8 0
Okla. City	13 5	16.0	5.0	8.0
Tulsa	13 5	15.0	5.0	8.0
Ft. Smith, Ark.	*15 0	*15.0	7.0	†9 0
Little Rock	*17.0	*17.0	7.0	†9.0

*Less 2½ cents to dealers. †Less 2 cents to dealers.

Southern District

STANDARD OIL CO. (KENTUCKY)†

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	22.0	22.0	7.0	11.0
Augusta	18.5	18.5	7.0	11.0
Macon	21.0	21.0	7.0	13.0
Savannah	20.0	20.0	7.0	12.5
Birm'ham, Ala.	20.0	20 0	7.0	11.0
Mobile	20.0	20 0	7.0	8.0
Montgomery	21.0	21.0	7.0	13.5
Jackson, Miss.	18.0	18 0	7.0	10.0
Vicksburg	20 0	20.0	7.0	10.5
Jack'ville, Fla.	20 0	20.0	8.0	10.0
Miami	20 0	20 0	8.0	12.5
Pensacola	21.0	21.0	8 0	13.5
Tampa	21.0	20.0	8.0	9.0
Lexington, Ky.	18 5	18 5	6.0	10.5
Covington	18 5	18.5	6.0	10.5
Louisville	18.0	18 0	6.0	10.5
Paducah	19.5	19.5	6.0	8.0

A third grade "Kyso Green" is sold at a price generally 3 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 3 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	16 0	19 0	5.0	13 5
Pueblo	16.0	19 0	5 0	12.5
Grand Jctn.	20 0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	18 0	21 0	5.0	11.5
Butte, Mont.	20 0	23.0	6.0	17.0
Billings	23 0	26 0	6 0	16.5
Great Falls	23.0	26 0	6 0	17.0
Helena	22 0	25.0	6 0	17.0
Salt Lake, Utah	18 0	21 0	5.0	16.0
Albu'que, N. M.	18.0	21 0	*7.0	14.0
Boise, Idaho	22 5	25.5	6.0	18.0
Twin Falls	22.5	25.5	6.0	18.0

*One-cent city tax.

Central South District

STANDARD OIL CO. (LOUISIANA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	15.0	15 0	*7.0	†11.0
Baton Rouge	17.0	17 0	6 0	†10.0
Alexandria	15 0	15 0	*7 0	†10.0
Lafayette	15.0	15.0	*7.0	†10.0
Lake Charles	15 0	15.0	*7.0	†10.0
Shreveport	16 0	16.0	6 0	†10.0
Knoxville, Tenn.	20.0	20.0	8 0	11.5
Memphis	16.0	16 0	8 0	9 0
Chattanooga	21.0	21.0	8.0	11.5
Nashville	20 0	20.0	8 0	11.0
Bristol	22.0	22.0	8 0	12.0
Lt. Rock, Ark.	18.5	18.5	7.0	9.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

Ohio

STANDARD OIL CO. (OHIO)*

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points	17.0	17.5	5.0	*12.0

*Two cents off on gasoline tank wagon to dealers and commercial accounts; 2½ cents off tank wagon on kerosene to dealers.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	16.0	17.0	5.0	10 25
McCook	19.0	19.0	5.0	11.75
Norfolk	18 75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

New York and Part of New England District

STANDARD OIL CO. (NEW YORK)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	15 5	16.5	4.0	9.0
New York	16 0	16 0	4.0	9.5
Buffalo	16 5	17.5	4.0	9.0
Rochester	16.5	17.5	4.0	9.0
Syracuse	16.5	17.5	4.0	9.5
Boston, Mass.	15.5	16 5	4.0	8.0
Augusta, Me.	18.0	19.0	4.0	9.0
Manch'tr, N. H.	18.0	19.0	5.0	8.0
Burlington, Vt.	18.5	19.5	5.0	8.5

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	17.0	18 0	4.0	10.0
Philadelphia	16.0	17.0	4.0	10.0
Scranton	16.5	17 5	4 0	10.0
Allentown	16 5	17.5	4.0	10.0
Altoona	17.0	18 0	4.0	10.0
Erie	16.0	16.0	4.0	10 0
Dover, Del.	16.5	17.5	4.0	10.0
Wilmington	16.5	17.5	4 0	10 0
Springf'd, Mass.	16.0	17.0	4.0	8.0
Worcester	16 0	17.0	4.0	8.0
Boston	15 5	16.5	4.0	8.0
Providence, R.I.	14 5	15.5	3.0	8.0
Hartford, Conn.	15.0	16.0	3.0	8.0
New Haven	15.0	16.0	3.0	8.0

Atlantic Coast District

STANDARD OIL CO. (NEW JERSEY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	16 9	17.9	4.0	11.2
Newark	16.2	17.2	4.0	8.5
Annapolis, Md.	18.5	19.5	5.0	10.0
Baltimore	17.9	18.9	5.0	7.0
Cumberland	19.4	20.4	5.0	11.7
Wash'g'n, D. C.	16.4	17.4	5.0	10.0
Danville, Va.	20 6	21 6	6.0	11.9
Norfolk	19.0	20.0	6.0	10.5
Petersburg	20 1	21.1	6.0	11.4
Richmond	19.4	20.4	6.0	10.7
Roanoke	20.6	21.6	6.0	11.9
Charles'n, W.Va.	19 3	20.3	5.0	11.6
Parkersburg	17 9	18.9	5.0	10.2
Wheeling	18.5	18.5	5.0	11.2
Charlotte, N. C.	22 2	23.2	7.0	13 5
Hickory	22.4	23.4	7.0	13.7
Mt. Airy	22.5	23.5	7.0	12.8
Raleigh	22.0	23.0	7.0	12 8
Salisbury	22.3	23.3	7.0	12.6
Charleston, S.C.	20.0	21.0	7.0	10.3
Columbia	21.9	22 9	7.0	12.2
Spartanburg	22.2	23.2	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Naphtha

	Tank wagon	Car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12 7	7.33
Cleaners' naphtha	15.2	9.23
Stanisol	15.3	9.33

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank truck†	Gasoline: Posted retail	Gasoline: Incl'ds tax of	Kero. tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4 0	15.5
Reno, Nev.	22.0	22.0	5.0	19 0
Portland, Ore.	21.0	20.0	5.0	16.5
Seattle, Wash.	22.0	21.0	6 0	16 5
Tacoma	22.0	21 0	6 0	16.5
Spokane	25.5	24 5	6.0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

TANK WAGON CHANGES

Standard Oil Co. (Indiana), effective September 16, reduced gasoline service station price to 15.1 cents at Chicago, 15.9 cents at Des Moines, Iowa, 15.4 cents at Minneapolis, Minn., and 15 cents at St. Joseph, Mo.

Atlantic Refining Co., effective September 14, established a gasoline tank wagon price of 15 cents and 16 cents service station at Erie, Pa.

Stnadard Oil Co. of New Jersey, effective September 12, established tank wagon and service station prices of 18.5 cents at Wheeling, W. Va.

Standard Oil Co. (Kentucky), effective September 12, advanced gasoline tank wagon and service station prices at Montgomery, Ala., from 20 to 21 cents; effective September 14 reduced gasoline tank wagon and service station prices 2 cents to 18 cents at Jackson, Miss.; effective September 14, reduced gasoline

(Continued on Page 29)

Crude Oil Prices

(Continued from Preceding Page)

Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$ .65
Urania, La. (Apr. 12, 1932)	.60
East El Dorado, Ark. (Apr. 6, 1932)	.65
Stephens, Ark., below 29° (Apr. 13, 1932)	.61
Stephens, Ark., 29° and above (Apr. 13, 1932)	.64
Other fields	See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana, Gulf Refining Co. and Louisiana Oil Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.; East El Dorado by Magnolia Petroleum Co.; effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

South Central and Southwest Texas

Darst Creek (Apr. 1, 1932)*	$ .75
Luling (Apr. 1, 1932)*	.44
Mirando (Apr. 1, 1932)*	.90
Pettus (Apr. 11, 1932)‡	1.00
Salt Flat (Apr. 11, 1932)‡	.75
Thrall§	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski§	
Same as Mid-Continent gravity scale up to and including 38-38.9°	
Somerset¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°	

*Magnolia Petroleum Co., The Texas Company, Humble Oil & Refining Co. posted 80 cents for Mirando, April 11. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. §Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ¶Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

Middle Western States

OHIO OIL CO.
(Effective April 11, 1932)

Lima	$1.15
Wooster	1.25
Illinois	1.10
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (July 12, 1932)*	.85
Muskegon (July 14, 1932)†	
	Mid-Continent gravity scale
Muskegon (June 30, 1932)‡	.95
Somerset, Ky. (Apr. 25, 1932)	.85
Hart County, Ky. (June 10, 1932)§	1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sal Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco*	$0.65

*F.o.b. ship, based on July transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Nov. 3, 1931):	
Petrolia*	$1.99
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-48.9	2.13
Crude oil 50 and above	2.50
Crude naphtha	2.33
Discolored naphtha	2.06

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

XUM

NEWS FOR SALES DEPARTMENTS

Wide Variety in Prices for Government Contracts

NEW YORK, Sept. 17.—A number of government oil contracts were reported awarded by various bureaus recently as follows:

Petroleum Products Co., St. Louis, 15,000 bbls. of fuel oil, 39 cents per barrel, 1 per cent, f.o.b. tank cars point of shipment, for delivery to the U. S. Engineer at St. Louis.

Sun Oil Co., 4,000 gallons of annealing oil, 4 cents per gallon, 1 per cent, delivery to Frankford Arsenal, Pa.

Pan American Petroleum & Transport Corp., 8,000 gallons of gasoline, 11.5 cents per gallon, delivery to U. S. Engineer at New Orleans.

Gulf Refining Co., 60,000 gallons of gasoline, 9 cents per gallon, 2 per cent, delivery to U. S. Engineer at New Orleans.

Gulf Refining Co., 8,500 gallons of gasoline, 1 cent under service station price, and 300 gallons of lub oil, 20 cents per quart, delivery to Department of Agriculture, Washington, D. C.

Standard Oil Co. of New Jersey, following gasoline orders for delivery to Army Quartermaster, Brooklyn, N. Y., 1,100 gallons at 18.1 cents; 1,100 gallons at 17.6 cents; 1,100 gallons at 17.6 cents; 1,100 gallons at 16 cents; 1,100 gallons at 18 cents; 1,100 gallons at 17.6 cents, and 1,400 gallons at 16.4 cents.

Atlantic Refining Co., 35,000 gallons of gasoline, 7.82 cents per gallon, delivery to Army Quartermaster, Brooklyn.

Standard Oil Co. of Pennsylvania, 1,000 gallons of gasoline at 10¾ cents, delivery to Army Quartermaster, Brooklyn.

Sinclair Refining Co., 7,000 gallons gasoline at 7.02 cents, and 2,000 pounds of grease at 5½ cents, delivery to Army Quartermaster at Brooklyn.

Richfield Oil Co., 2,000 gallons of gasoline at 10 cents, delivery to Army Quartermaster, Brooklyn.

Standard Oil Co. of New York, 10,000 gallons gasoline at 7½ cents and 1,000 gallons at 13.9 cents, delivery to Army Quartermaster, Brooklyn.

Sinclair Refining Co., 10,000 pounds cup grease in barrels, $1,585; 24,000 pounds gear and wire lubricants in half barrels, $1,645, 1 per cent; delivery to U. S. Engineer at Vicksburg, Miss.

REFUSE "ZIT" TRADEMARK

NEW YORK, Sept. 17.—Following protests by Stanco, Inc. (subsidiary of the Standard Oil Co. of New Jersey), whose trademark for insect spray is "Flit," the United States Patent Office has refused to register "Zit" as a trademark for stock spray and poultry insectide. The application for the trademark was made by the Bonide Chemical Co. of Utica, N. Y.

The Patent Office, in its ruling, held that the products have much the same descriptive properties, and that the marks are "clearly confusingly similar" and would result in confusion in the trade and among consumers.

CITY MUST PAY TAX

HOUSTON, Tex., Sept. 20.—Mayor Montieth questions the legality of the State to collect the 4-cent tax on gasoline purchased by the city and proposes to investigate the importation of supplies from Louisiana. He says Fort Worth is buying its gasoline without paying the tax, and because the Federal Government makes an exception in the case of cities buying gasoline the State must do likewise.

Report Progress in A. P. I. Program to Combat Gasoline Tax Evasion Evil

By PAUL E. HADLICK
Division of Marketing, American Petroleum Institute*

More than a year ago the oil industry began to organize in nearly every state to combat tax evasion and to insure adequate enforcement of gasoline tax laws. Realizing that the losses it was sustaining through tax evasion were losses to government also, it established committees of oil men in every state to work with state officials, hoping that through these combined and co-operative efforts Government might collect every dollar of gasoline tax revenue due it and that this industry might obtain every dollar of business to which it felt itself entitled.

It soon was learned that the laws of most states were inadequate to cope with the situation. It was found also that in many states failure to collect this tax was due either to lack of appropriations, of personnel, or of inclination. And it was found further that the officials of many states were unaware of the seriousness of tax evasion. Few realized that the gasoline tax definitely put the Government in a business conducted largely on a credit basis, and that it was necessary to take at least ordinary precautions against credit risks and losses. The states were spoiled by the ease with which this tax produced revenue at low rates and were unprepared to cope with the difficulties attending collection at exorbitant rates. In fact, it is a matter of record that in most states no bonds were required from distributors of gasoline that frequently were in the state's debt to the extent of thousands and thousands of dollars. Until a few months ago virtually the only punishable offense under most gasoline tax laws was filing false reports. In one state, at least, it was quite within the law to evade payment of this tax simply by filing a report of taxes due with the notation "no funds available." The state could do nothing to collect except sue for the indebtedness.

Remedial Legislation Sought

This industry set about to aid in the passage of laws equipped with sufficient teeth to insure something like full collection of the tax. Nineteen thirty-two was an "off" year, legislatively, and few regular sessions were scheduled. But such regular sessions as were held, plus numerous special sessions, provided opportunity to enact remedial legislation. Among the states which have amended their gasoline tax laws with beneficial effect are New York, Virginia, Kentucky, Mississippi, Louisiana, Arizona and Indiana. A Federal law, designed to provide for a complete record of all shipments of gasoline in interstate commerce, was approved as an act by the Senate and now is in House committee awaiting action when Congress reconvenes.

The administrative machinery in many states has been strengthened by the adoption of stringent regulations enabling tax collecting agencies more effectively to function. Typical are those of Arkansas and Tennessee, where thorough checking of gasoline shipments and sales now is possible. In some states it has been possible to improve the situation by enlisting the co-operation of state police, state highway departments, oil inspection departments, courts, etc. Not a few states have imposed restrictions which actually work hardships upon the legitimate undertakings of this industry. This situation is understood and countenanced as a sacrifice necessary to the accomplishment of general good.

Prosecutions Encouraged

This industry has not assumed the role of prosecutor of gasoline tax evasion cases, nor can that be regarded as its proper sphere of activity. Prosecution for violation of the law is a necessary function of government, and government has been encouraged to prosecute. And although the barriers of politics and patronage, of lackadaisical enforcement and disinterested courts, of weak laws and inadequate departments having handicapped this work, much has been done. There is no accurate yardstick with which to measure this work. But I may tell you that in 16 states in six months more than 225 persons or firms were prosecuted for evasion of gasoline taxes approximating $1,000,000. Sentences totaling more than nine years and fines exceeding $6,000 were imposed, and some tax revenue recovered. The broad effect of such accomplishments is, and necessarily must be, neither the imposition of heavy fines and long sentences nor the recovery of tax money, much of which I fear must be written off to profit and loss, but rather public demonstration that tax evasion will be punished so severely as to render the risks unjustifiable by possible profits. Tax evasion never can be fully stopped, but I sincerely believe that evasion can be made so unprofitable as to be unattractive.

The industry is encouraged by progress so far made, slight as it may be. But it knows full well its work along this line is not ended. The efforts of one year cannot correct the evils that have been developing for a decade. Gasoline taxation still is excessive; tax evasion still is rampant. High tax rates and tax evasion appear to coincide, and this industry seemingly must prepare itself to conduct at least a five-year offensive against both.

Our knowledge and our experiences thus far lead to the conclusion that a gasoline tax rate of 2 cents per gallon is the highest that can be collected with any degree of certainty. Even at 2 cents evasion will occur in congested centers of population and in large markets. But ordinarily the financial rewards of tax evasion at this rate are small, for marketing costs consume profits on bootleg gasoline as avidly as on the legitimate product. This well may be accepted as good tax policy and wisdom, a gasoline tax of 2 cents per gallon, fully collected, and with revenue expended only upon roads, provides sufficient income to finance any reasonable road program needed by the average state. Even at that rate the levy represents a sales tax of 10 per cent upon the normal retail price, a high import truly, but far below existing rates of 25 to more than 100 per cent.

*Annual meeting, National Petroleum Association, September 14.

TANKER IS REFITTED

CHATHAM, Ontario, Sept. 17.—The British tanker "Cymbeline," which figured in the gasoline explosion at the Vickers drydock at Montreal on July 17, in which 31 workmen and firemen lost their lives, has been refitted and left on September 17 for Port Arthur, Tex.

Pennsylvania Association Specifies Uses for Emblem

OIL CITY, Pa., Sept. 20.—The Pennsylvania Grade Crude Oil Association has provided more stringent rules in regard to the showing of the association emblem in advertising matter. Officers of the association claim abuses of the practice of including the emblem on advertising matter have been found which work a distinct handicap to the individual refiners in the sale of trademarked brands. They claim the emblem has been made the center of attraction in the advertising copy and that many customers looked for such a sign and did not look for any particular trademark. For this reason, the association has designated both the size and the position of the emblem on advertising exhibits.

The association has also instituted a new policy in regard to supervising the maintenance of quality and the education of the public in lubricating oil quality in the larger cities.

Representatives will be stationed in southern California, Baltimore, Philadelphia, New York City, Boston, Cleveland, Detroit, Chicago and St. Louis. Additional representatives will augment this group in time so that an effective policing of the sale of their products is obtained. These representatives will work with the local Better Business bureaus and also with local authorities to find aid in the prosecution of tax evaders and those substituting oils.

KANSAS-NEBRASKA AGREEMENT

Kansas exempts from tax gasoline used for agricultural purposes and Nebraska does not. For that reason numerous shipments are believed to be made from Kansas into Nebraska on motor fuels used for other purposes and the tax has been evaded at the expense of those oil companies attempting to compete with the tax evaders. To minimize the practice, State Treasurer T. W. Bass has received the assurance from Kansas state inspector that reports will be made showing the purchaser and quantity of motor fuels transported from that State into Nebraska in each instance where a tax exemption slip is obtained.

SINCLAIR PLACES ORDERS

The Sinclair Refining Co. has placed an order for 115,000 pounds of herringbone twill to be used in the manufacture of uniforms for station attendants. Contracts for the fabrication of the uniforms has been awarded to four manufacturers.

To take care of specialty sales, the company also has awarded a contract for 1,000,000 tin containers. This does not include the containers used for the regular grades of Sinclair motor oils.

GERMANY USED LESS GASOLINE

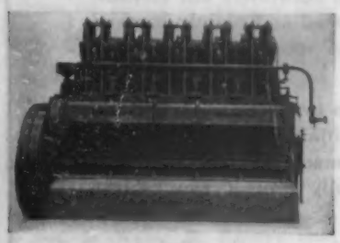
WASHINGTON, D. C., Sept. 15.—Increased use of alcohol with gasoline as a motor fuel, combined with other factors including the decrease in the use of automobiles, has caused a decline in the demand for American gasoline in Germany.

A German firm selling the German Dye Trust's synthetic gasoline has placed a motor fuel on the market which contains 78 per cent synthetic gasoline and 22 per cent alcohol, according to advices just received from Trade Commissioner Daughert, reporting from Berlin. An increase in the legal alcohol mixture required by the government is expected by October 1.—C. E. K.

NEW AND IMPROVED EQUIPMENT

Standardized Diesel Line Meets Many Requirements

Covering power requirements from 50 to 1,000 horsepower, in 2 to 8-cylinder units, an improved line of four-cycle direct injection moderate speed Diesel engines for stationary and marine services,



has been introduced by the Worthington Pump & Machinery Corp., Harrison, N. J.

Among the features of construction enumerated by the company are: Individual fuel pumps for each cylinder, with fuel lines of equal length, hydraulically control the injection of fuel. Individual air starting pilot valves control the admission of starting air to each cylinder, and spray valves are pressure actuated, no push rods or levers being used. In the larger engines air inlet and exhaust valves are carried in removable and interchangeable cages, the exhaust valve cages being water cooled. In the smaller engines, these valves (also interchangeable and adjustable) seat directly in the cylinder head and operate in removable bushings.

All of these Diesels can be converted to operation on manufactured or natural gasoline. The same base, frame, crankshaft and connecting rods are used for both engines. The camshaft is the same except that the fuel cams are omitted or not used if the engines are to operate on gas. When running on gas, a magneto and spark plugs replace fuel pumps and spray valves. A mixing valve is bolted to the end of the regular inlet manifold, and gas engine cylinders with larger valves in the heads are substituted.

Thiokol Reported to Solve Many Problems in Packing

Describing Thiokol as "the answer to many packing problems," the Garlock Packing Co. of Palmyra, N. Y., has announced the development of a number of packing items such as diaphragms, discs, gaskets, etc., made of various Thiokol compounds. This material, a new chemical product, is described as having most of the characteristics of rubber but not affected by solvents, and not oxidising.

The new Garlock packings made of the Thiokol compounds are recommended especially where they are to be employed near such substances as gasoline, ether, kerosene, carbon tetrachloride and gas. No sign of deterioration has been found in the new packing items even when in use for long periods of time, the company reports. It is said that pipe line operators will find the new packings especially advantageous since they are expected to eliminate the necessity for much expensive excavating to get at pipes for repairs.

Thiokol packings for the oil industry are featured in the Garlock line. Discs made of this material are said to have been found successful in the automatic valves used in gasoline dispensing stations on filler hose, tank wagon valves, and in ordinary pipe line valves handling gasoline, benzol and other rubber solvents.

Notes About Trade Literature

A new welding torch and a new cutting torch are illustrated and described in a special bulletin by the Torchweld Equipment Co., 224 North Carpenter Street, Chicago.

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The Hutchison Engineering Works, 540 Washington Boulevard, Chicago, has prepared for distribution a 4-page bulletin giving facts about "Flolight" steam turbine generator sets.

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"Wide Range at Last," is the title of a 12-page booklet prepared for distribution by the Builders Iron Foundry, Providence, R. I., describing and illustrating the Chronoflo electric fluid meter.

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A bulletin which the Emsco Derrick & Equipment Co., Los Angeles, Calif., is sending on request is devoted to the Emsco-D+B Inverto pull-out pump.

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The Youngstown Sheet & Tube Co., Youngstown, Ohio, is sending out a 28-page booklet, "What We Make," containing a list of the company's products, along with interesting facts about them.

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The Delta Electric Co., Marion, Ind., is sending out a circular descriptive of its Silverlite new style flashlight lantern.

Kaye & McDonald, Inc., West Orange, N. J., have available a leaflet explaining the operation of their new K-Master Midget modernized inverted bucket steam trap.

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An eight-page bulletin distributed by the Lincoln Electric Co., Cleveland, Ohio, contains pictures and detailed description of the new Lincoln shield-arc welder.

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The Macwhyte Co., Kenosha, Wis., is sending out an illustrated circular in colors, announcing that Macwhyte wire rope is now preformed and has a new and improved internal lubrication.

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A 12-page bulletin, No. 36, issued by the Baldwin-Southwark Corp., Philadelphia, Pa., covers its line of high-pressure hydraulic pumps, both horizontal and vertical. A detailed description together with tables of dimensions and of capacities is included.

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"The Welding of Genuine Wrought Iron," a 4-page folder published by A. M. Byers Co., Pittsburgh, Pa., contains practical information, including engineering data on properties and characteristics of wrought iron. A copy may be obtained by writing direct to the engineering service department.

Among the Equipment Houses

John B. Foley, Jr., 510 Hills Building, Syracuse, N. Y., has been appointed representative for Coppus Engineering Corp. of Worcester, Mass., in that district. He will have charge of sales of Coppus blowers and turbines, Heat Killer cooling fans and Coppus-Anis air filters.

Louis E. Underwood, managing engineer of the stationary motor engineering department of the General Electric Co. in Lynn, Mass., has been appointed manager of the Pittsfield, Mass., works of the company to succeed E. A. Wagner, who has retired.

John D. McLin, who for 15 years represented the New York Belting & Packing Co. in the Mid-Continent Field, has joined the Iverson Tool Co. and will have charge of the mechanical rubber goods and refinery specialty department. Iverson has made arrangements by which it will carry the full line of oil-field belting, special refinery packings and hose made by the Quaker City Rubber Co.

The Rawplug Co., Inc., of New York, has appointed the C. K. Cairns Co., 119 East Fifth Street, Cincinnati, Ohio, as its representative in that district.

F. H. Fowler, president of Foote Brothers Gear & Machine Co., Chicago, returned recently from a trip through the Grand Rapids, Mich., and northern Indiana territory.

Dehydro, Inc., Tulsa, has announced that its name has been changed to the Dehydro Co. The firm handles petroleum treating compounds.

New Portable Conveyor Is Marketed by Link-Belt Co.

A new portable belt conveyor, embodying improvements over last year's model, is announced by the Link-Belt Co., Philadelphia, Pa. Among other features, it incorporates fixed steel retaining sides extending the entire length of the conveyor, thus preventing lumps from spilling over the sides of the belt at any point.

To obviate a common source of trouble experienced with portable belt conveyors of this general type, the foot end has been improved to keep material away from the return run of the conveyor belt. Another feature is the new arrangement of the foot end plate, permitting the convenient use of the machine without this plate, when desired, minimizing labor in feeding and serving to speed up loading.

The machine is suitable for the economical loading or unloading of any loose material. Various modifications are possible, such as gas engine operation; omission of truck wheels; suspension of conveyor from a trolley; omission of side plates when handling bagged material, etc.

TO MAKE PAPICO ASSEMBLIES

Arrangements have been completed by the Southwest Welding & Manufacturing Co., Inc., of Alhambra, Calif., to manufacture and distribute the Papico orifice meter run assemblies, according to John Lucas, president. These assemblies for several years have been manufactured by the Pacific Pipe & Supply Co., which is in process of liquidation. It is the plan of the welding company to expand its manufacture of products, including the fabrication of tanks, pipe, heat exchangers, pipe bends, flanges, expansion joints, etc., for the oil and gas industry.

Men Well Known in the Equipment Field

G. L. HARMAN

The Keystone Driller Co., Beaver Falls, Pa., has appointed G. L. Harman as general salesmanager. Mr. Harman until recently was salesmanager of the Industrial Brownhoist Corp., Cleveland, Ohio. He was connected in a similar capacity with the Industrial Works of Bay City, Mich., from 1914 until that company was merged with the Brown Hoisting Machinery Co. Mr. Harman is a native of Bay City and graduated from the engineering department of the University of Michigan in 1906.

Simultaneously with the appointment of Mr. Harman as general salesmanager Lynn H. Ransom was made chief engineer of the Keystone Driller Co. Mr. Ransom is a native of Beaver Falls. In 1925 he received the degree of mechanical engineer from Cornell University. Since 1926 he has been connected with the engineering department of the Keystone Driller Co.

Immense Gasoline Carrier Built for Standard Oil Co.

A 5,400-gallon frameless semitrailer now being operated on the Atlantic Seaboard by the Standard Oil Co. is believed to be the largest gasoline hauling vehicle in existence. It is one of a pair built by the Columbian Steel Tank Co. with the idea of giving maximum gallonage under New Jersey highway statutes which limit the total weight of any one vehicle to 60,000 pounds.

Weights on the tank are divided as follows:

	Pounds
Tank, including hose tubes, tunnel outlets, valve, etc.	8,950
Special AK Mack tractor, 155" w.b.	12,000
Fifth wheel assembly	770
Landing gear assembly	330
Rear axle assembly, tandem type	4,950
Pay load, 5,400 gals. gasoline	33,000
Total weight	60,000

The tank has nine compartments, each holding 600 gallons to meet the legal restrictions in the State of New Jersey. It has a tunnel manifold with two 4-inch outlets. Two master control operators located at rear in an inset in the tank operate the nine compartment valves and also the outlet valves. One operator opens five compartments; the other opens four. With all valves open the tank load may be completely emptied in approximately 30 minutes.

Fourteen pneumatic tires carry this enormous load. At the front are 9:75x24 singles; at the rear 9:75x24 duals on tandem axles and in the middle are 10:50 x24 dual tires. Overall length of the outfit is 36 feet. The tank itself weighs 1.6 pounds per gallon of gasoline carried.